STUDENT FAILURES IN THE NINTH GRADE OF THE NEWTON PUBLIC HIGH SCHOOL FROM 1926 TO 1956

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by

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THE PROBLEM AND DEFINITIONS OF TERMS USED

The incidence of failures by students in the public schools of the United States has been a controversial issue for many years. Some teachers have felt that failures were necessary to maintain the scholastic standards within the classroom, while others have believed that failures were unnecessary and even harmful to the school system and to the students. The majority of modern educators agree that, if possible, student failures should be reduced or completely eliminated. A study is hereby made to ascertain whether the practice within a specific school had accepted a premise of education of failure reduction. The data collected for this study covers a span of thirty years.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to discover any changes in the percentage of student failures in the Newton, Iowa, public high school over a specified period; (2) to compare the percentage of failures of boys to that of girls enrolled in the same school for a comparable number of years; (3) to determine which subjects were failed most frequently; and (4) to find any differences in the percentage of students who have not completed subjects in a specified period of time over a specified period of time.

Importance of the study. Student failures have long been considered as being wasteful of human resources. This study attempted to discover the prevalence of student failures in various subjects of ninth grade students in the Newton Public High School, and to compare the percentage of failures over a thirty year period. It is hoped these data will determine whether or not there is an acceptance of the educational premise of less failures as a way of teaching.

Since improvement should always be preceded by a knowledge of the weaknesses and strengths in the program, this study may supply information to be used as a guide for further policy making in the school.

Procedure. The superintendent, Mr. Ben C. Berg, and the senior high principal, Mr. Harold Lynn, were most cooperative in permitting the use of the Newton Public School system's records for this study. The scholastic records of all ninth grade students for the first four of the thirty year period were compared with the five years at the end of the period. The study is thus based upon data obtained from 1926-30 and from 1951-56 inclusive. Each semester's records were carefully scanned to determine: (1) the number of boys and girls who had dropped each subject, (2) the number of boys and girls who had failed each subject, (3) the number of boys and girls enrolled in each subject, and (4) the percentage of the entire ninth grade that was enrolled for each subject.

Data were then computed for each semester which included: (1) the per cent of boys and girls who had failed in each subject, (2) the per cent of boys and girls who had dropped each subject, (3) the number of boys and girls enrolled in each subject, and (4) the percentage of the entire ninth grade that was enrolled for each subject.

Data were then computed for each semester which included: (1) the percentage of boys and girls who had failed in each subject, (2) the percentage of boys and girls who had dropped each subject, and (3) the per cent of subjects offered that contained student failures.

A comparison was then made between the percentage of failures and between the percentages of drop-outs of each of the years studied to show the trends in each subject from semester to semester. A presentation in both graphic and tabular form will be used for clarifying interpretation.

In addition to the data obtained from the school records, library research yielded much interesting information which was pertinent to the study. Topics from several books dealing with education were reviewed and articles from periodicals relating to education were read in order to develop a background for the study.

II. DEFINITIONS OF TERMS USED

Failures. The term "failure" was interpreted as meaning any student who had received a failing grade for a

semester's work in a particular subject. No attempt was made to classify the number of failing grades which any one student had received during a given semester or year. If a student had received two failing grades for a semester's work, one for each of two different subjects, in the computation of the total number of failures per semester it was considered as two failures. This method of evaluation was selected because it gave a finer degree of measurement than could have been obtained by using only the number of students who had failed during the semester without regard to the number of subjects failed.

Drop-outs. All students who did not complete the semester's work in a given subject were considered as having dropped the course. The exceptions were the students who had transferred to another school before the semester's work was finished; those pupils were not considered as drop-outs, but rather as transfers.

Students. All references to students in the study include only those pupils who were enrolled in the ninth grade of the Newton Public School system for the specific semester studied.

CHAPTER II

THE CONSEQUENCES OF FAILURES

Much has been written of the detrimental effect which student failures have on the individual students, to society, and in terms of the expenditures of the school. A brief summary of the most prevalent opinions will be presented.

I. FAILURES AS A WASTE OF SCHOOL FINANCES

From one point of view, any student failure within the public educational system is a waste of school expenditures. According to Reeder, approximately 10 per cent of the pupils enrolled in the schools of the United States fail annually.[1] In a secondary school system with an average enrollment of two hundred students per grade, this would mean there would be twenty students receiving failing grades in each of the four grades from ninth grade through twelfth grade. Eighty students would be required to repeat at least one subject the following year.

In 1955, in a school of comparable size, the average cost per student in average daily attendance from the first

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[1]Ward G. Reeder, The Fundamentals of Public School Administration (New York: The Macmillan Company, 1951), p. 494.

grade through the twelfth grade amounted to $244.51.[1] This would indicate an expenditure of $61.13 per subject per student at the secondary level if each student were required to carry four subjects per year. At this rate, the cost for requiring eighty secondary students to repeat each of the subjects failed would be at least $4,890.40. This is probably a very conservative estimate inasmuch as the cost per student includes elementary pupils as well as secondary students; usually the cost for elementary children is substantially lower than for secondary students.[2]

By the above reasoning it can be seen that failures, with the requirement to repeat the courses failed, can be an expensive waste of school finances with very little educational return for the money invested. Because of this inefficiency, some educators believe that failures should be entirely eliminated.

> In this question of promotion we have established a viewpoint which may be worth summarizing. In the first place, failure or non-promotion is failure for the school rather than for the child. The effect of any promotion rate which is less than 100 per cent rapidly reduces the number of on-time pupils. It may easily make all efforts to reduce retardation and elimination of no avail. The usual reason for making a pupil repeat the work of a grade is that he may learn the work better. There is a consensus of evidence, however, to the effect

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[1]"Budget Proposal: July 1956" (Newton, Iowa: Superintendent of Schools), p. 5.

[2]Reeder, op. cit., p. 495.

> that this expectation is not usually realized and the point is even raised whether the improvement which some pupils show may not be as properly attributed to an added year or half-year of maturity as to the fact of repetition. Finally the fundamental question is raised as to whether any observed improvement is as great as it might have been had the pupil been promoted.[1]

Various methods of reducing the cost due to student failures have been suggested by different educators. Probably the most successful of these has been to allow trial promotion, since failing students who have been promoted to the next grade on a trial basis have usually shown greater motivation toward the mastery of the subject-matter than those who have been required to repeat the courses previously failed.[2]

II. FAILURES AS A DETRIMENT TO STUDENTS

In spite of the enormous financial waste caused by student failures, this is of trivial significance when compared with the loss of human resources which it engenders. The monetary deficit caused by failures can eventually be absorbed by the school budget, but the effect which it has upon the failing student may never be fully known. A student who repeatedly receives failing grades may ultimately quit school with only a partial education. Such action will limit

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[1]Burdette R. Buckingham, Research for Teachers (Chicago: Silver, Burdett and Company, 1926), p. 303.

[2]Reeder, op. cit., p. 495.

the student's economic capacity and weaken the pupil's emotional stability.

The Effect of Failures upon Economic Capacity.

According to a report from a representative of the Borden Company many students who regard school grades of little consequence have a rude awakening upon applying for positions in well established companies for the first time. Almost without exception, the applicant will be required to furnish a transcript of high school records or its equivalent. Most prospective employers regard the applicant's scholastic achievements in high school as an indication of probable success or failure, as may be evidenced by the following question which was recently directed to the employment division of a large well-known company:

> Is a teenager's high school record important when it comes to getting a beginning job? Does the student with a "B" average have a better chance to succeed in the business world than the student with a "C" average?[1]

The company representative answered:

> A student's high school record is very important in helping him get a job. In most cases, school grades are the only measure of achievement which the beginner can present. The failure in high school who later succeeds on the job is an exception to the rule. No young person should regard himself as an exception. The risks are too great.[2]

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[1]The Borden Company, "Does Your High School Record Count?" Scholastic Teacher, LXVIII (February 16, 1956), p. 6.

[2]Ibid.

Probably a student with a scholastic record containing numerous failing grades will be extremely handicapped when applying for his first position. According to Coon, the applicant will also have developed certain undesirable characteristics while attending school which will strongly affect the quality of work done and also jeopardize the chances of success. Conn, in his recent study of drop-outs conducted in Syracuse, found that the same patterns which existed in school also continued in work situations outside of school.

> We found that boys and girls left school because they could not get along with the principal or with the teachers. We also found that some of them have had five, six or seven jobs since leaving school, and one of the reasons given was that they could not get along with the boss. We found that another reason why they left school was because they had been unable to arrange their programs of work so that they could take four subjects in a row and then have the rest of the day free. We found another reason they left their jobs was because the hours were too long. We found that one of the reasons they left school was their dislike for the work which was offered in school; they did not like the work in which they found themselves engaged. We found they left school because they were not getting enough out of it for themselves, and we found that they left their jobs because the wages were not high enough.[1]

This would indicate that failing students have not totally failed in the learning situation; the pupils have unwittingly been induced to learn ways of solving urgent problems by using methods which are not accepted by society

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[1]Harold J. Coon, "Excerpts From Statements Made at the General Session, Tuesday afternoon, January 24", Why Do Boys and Girls Drop Out of School, and What Can We Do About It? Federal Security Agency, Office of Education, Circular No. 269 (Washington: Government Printing Office, 1950), p. 19

as being conducive to good citizenship and success. Nevertheless, learning has definitely taken place. The problem, then, is not of assisting failing students to learn, but rather the guiding of that learning which occurs into acceptable, constructive patterns for successful problem solving. In order to provide such help it becomes necessary for both educators and parents to gain empathy with the student. This can be accomplished only by obtaining a thorough knowledge of the pupil's emotional make-up in order to correctly interpret reactions to the various phases of formal education.

The Effect of Failures Upon Emotional Stability.

There may be some question as to whether the existence of emotional instability originally inherent in the student leads to failure or whether it later develops as a result of other factors which prevent success. However, there is little doubt that continued failures will increase the degree of severity of any unstableness which might be present in the child.

> Probably the greatest loss from non-promotion comes to the pupil. Non-promotion to him usually means that he must repeat the work of the subject or the grade. It means that he becomes retarded, which usually results in the pupil being branded as incompetent by his schoolmates, his relatives, and his friends. There is danger in such an instance that the pupil will develop an inferiority complex and acquire a grudge against the school and society. When a pupil is not promoted, there is danger that he is being prepared for failure in life. Such losses to the pupil and to society cannot be measured in

dollars and cents.[1]

Emotional stability should be a prized possession at any age, but it is of utmost importance to those who are in the early adolescent period of life. Any failures during this period might well tend to cause those students who already suffer poor mental health to become delinquent.

> From juvenile court statistics it would seem that the prime age for the onset of delinquency is in early adolescence, at thirteen to fifteen years. The notoriour peak age of serious crime, as shown by F.B.I. figures, occurs prior to the last years of adolescence. Ordinarily it is at eighteen years of age, with a gradual but very definite decline for the following years.[2]

Ironically many students quit school just at the age when there is the greatest need for the stabilizing influence of a well organized society such as that found in a wholesome school environment. Since the greatest number of students leave school between the eighth and ninth grades, many studies have been conducted to ascertain the reasons for this action during such a crucial period.[3]

Reasons for Student Failures and Drop-outs.

Because of the great diversity of factors found to

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[1]Reeder, op. cit., p. 493.

[2]William Healy and Augusta R. Bronner, "What Makes a Child Delinquent?", Juvenile Delinquency and the Schools, The Forty-Seventy Yearbook of the National Society for the Study of Education. (Chicago: The University of Chicago Press, 1948), p. 37.

[3]Reeder, op. cit., p. 494.

hinder a student's successful scholastic career, Taber established four general catagories in which to classify related reasons for students leaving school. These include: (1) lack of interest, (2) frustration, (3) adolescence, and (4) financial reasons.[1] The same organization has been adopted for this discussion.

Lack of interest. One of the chief causes of students leaving school was found to be lack of interest. In a study made by Dillon, 47 per cent of the students indicated this as the reason for having quit school; one group of 36 per cent, preferred work to school, while another group of 11 per cent, were just not interested in school work.[2] In order to meet this challenge, various improvements in the school curriculum have been suggested. Many educators are of the opinion that the work experience program will hold students better than a regular program because of the increase in interest which it promotes. Others feel, however, that such a program in itself cannot create enough interest to retain those students who would normally leave school. These individuals maintain that there can be no substitute for the lack of personal warmth and genuine interest in relationships which

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[1]Coon, op. cit., pp. 21-22.

[2]Harold J. Dillon, Early School Leavers, (New York: National Child Labor Committee, 1949), p. 50.

should exist between teachers and students. Pitkanen expresses this thought very well when describing the qualities which a sympathetic teacher should portray to the students:

> Besides his sympathetic understanding, his patience, tolerance and friendly firmness, he needs first to provide an interesting, even unique presentation of his subject matter. Methods should be devised-and not solely for entertainment-to interest, to intrigue, to stimulate the youngster into desiring more of the subject. There must be a value shown in its understanding, a practicality in the knowing.[1]

Obviously the value of teaching done within any curriculum will depend largely upon the qualities of the teachers. However, the attitude with which the students participate in the learning situation is of even greater importance. Krugman has shown that in New York City the holding power of some of the regular public schools is almost 100 per cent while that of some of the vocational schools is very low.[2] This difference in ability to retain the students is due to the select population which attends these respective schools. Those students who remain in school have received good guidance, have fulfilled select entrance and examination requirements, possess a high IQ, have attained a high reading level and have been reared in homes of high socio-economic levels.

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[1]Allan M. Pitkanen, "Antidotes for Failures," The Educational Forum, XIX (January, 1955), p. 237.

[2]Morris Krugman, "What Can We Do About It?", Why Do Boys and Girls Drop Out of School, and What Can We Do About It? Federal Security Agency, Office of Education, Circular No. 269 (Washington: Government Printing Office, 1950), p. 24.

On the other hand, the vocational schools provided for the needs of youngsters who could not successfully achieve in academic work. These too belong to a select group, but of the opposite extreme. This group generally represents children of low IQ's who have been reared in homes of low socio-economic status in which the parents did not believe that education was important and which often needed the youngsters' help in providing additional income.

If the assumption is made that each of the above schools has equally qualified teachers, then it is evident that lack of interest is induced from factors due to the conditioning in the home environment and the inherent abilities of the students.

Lack of interest is not only engendered in homes that are indifferent to education, however. In some instances the well intentioned parents' excessive concern for a child's success in school may cause them to commit acts which result in the student becoming bored and disinterested in school. Hurlock has pointed to some of the poor practices in which well-meaning parents frequently indulge, but which have a detrimental effect upon the child's attitude toward school.[1]

Perhaps one of the mistakes most often made by overly zealous parents with regard to faulty educational practices

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[1]Elizabeth B. Hurlock, "When Parents Are School Problems," Today's Health, XXX (September, 1952), p. 68.

is that of helping with the assigned home work. In the desire to have the child make a good showing with other classmates, the correctness of the work becomes more important than the learning of the principles for which the home work was originally assigned. After numerous repetitions, the pupil may become conditioned to parental help and refuse to show any individual initiative on future assignments. School, to that student, may then become a meaningless experience to be endured until the required number of years have finally elapsed.

The second major offense which parents sometimes commit against good educational policy is that of writing unnecessary excuses for youngsters. By excusing the pupil for every violation of school rules such as unprepared homework, unnecessary lateness or absence, or by writing notes of complaints about other children, the parents again cause the child to lose self-reliance and prevent the learning of responsibility for acts committed.

Since many of the attitudes of children are derived directly from the home, great care should be exercised by all members of the family to refrain from making unjust or injurious accusations in the presence of youngsters. Home attacks upon teachers, administrators, or other people often spoil the harmonious relations which exist between the teacher and the pupil.

Undue emphasis on marks places the student under an emotional strain and also leads to unrest and lack of enthusiasm

for school. Parents should bear in mind that a well adjusted individual is better prepared for life situations than is the person who has an expert knowledge of subjects, but who lacks the ability to make required social adjustments.

Psychological factors also influence a student's ability to adapt to the school situation and consequently have a direct bearing upon that pupil's chances for failure or success.

Frustration. The term frustration usually carries the connotation of being detrimental, as causing unhappiness or tortured experiences. Most frustration, however, is actually beneficial rather than harmful. If this were not the case, life would be virtually unbearable. Frustration, or mental blockage, is useful in causing an increase in individual efforts toward achievement of goals and in promoting reorientation, learning and growth. Only when mental blockage is carried beyond the endurance of an individual does it become detrimental by causing maladaptive consequences.[1]

Those disturbances which most often cause students to become maladjusted have been classified by Fenton into four areas dealing with: (1) insecurity, (2) social status, (3) nonacceptance of self, and (4) reluctance to accept reality.[2]

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[1]David Krech and Richard Cruthfield, Theory and Problems of Social Psychology (New York: McGraw-Hill Book Company, Inc., 1948), pp. 53-54.

[2]Norman Fenton, Mental Hygiene in School Practice (Stanford: Stanford University Press, 1951), pp. 221-222.

Of the four groups, insecurity is probably one of the most prevalent reasons for emotional disturbances among both students and adults today. Disturbances caused by this fear range from an adult's anxiety about economic problems in the home and undue concern over matters of health, to the seemingly trivial, general fears exhibited by some children of darkness, strangers or even of novelty.

Bond, in a study of two hundred high school students in the city of Los Angeles, discovered that some of the reasons most often expressed for doing mediocre school work were fear of failure, fear of the subject-matter, and fear of the teacher.[1]

Instability in the home life of a child is often reflected in the quality of school work done by the student. Death or the serious illness of the mother or father may necessitate the acceptance of adult duties by youngsters in the family. Such an emotional crisis, coupled with the change in physical routine within the home, will most certainly have a pronounced effect upon attitudes toward school. Constant strife among the various members of a family may also thwart a child's educational ambitions and change enthusiasm for school into indifference or even intense dislike.

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[1]Clifton A. Hussey, "Why Pupils Fail," NEA Journal, XLII (January, 1953), p. 46.

Doubts sometimes exist in the minds of youngsters as to the actual worth or importance of the family in terms of social status. Any seemingly unjust acts committed by schoolmates or teachers, or any indications of unpopularity is unconsciously attributed to the unfortunate, inherited, social prestige. This feeling, whether real or imagined, tends to frustrate the youngster and to cloud the real issues which produced these incidents.

Closely related to the disturbance caused by doubt of social status is the feeling of personal inadequacy which is sometimes developed. Children may feel inferior because of appearance, size, health, or strength. This may be followed by self-doubt and distruct, accompanied by feelings of guilt because of past behaviors or present attitudes. Such disturbances again will tend to cause emotional blocks and to distort the character development of the youth.

Finally, the mental disturbance which results from the reluctance to accept reality is indicated by the youngster's refusing to acknowledge home environments or the home neighborhood, and in the spurning of the authority of parents and teachers. Usually such an individual will give very little cooperation to classmates or teachers and will show definite lack of constructive interest in any endeavor. Often this type of maladjustment will also be accompanied by conflicts over choice of life work and over relationships with the opposite sex.

Besides lack of interest and frustration, a third reason for students leaving school is caused by problems which arise as a result of adolescence.

Adolescence. The period between childhood and adulthood is one of the most exasperating eras in the life of an individual in terms of adjustment. Not only is the maturing youngster faced with making changes in social conduct and in accepting the new responsibilities brought on by more freedom, but the individual must also become acquainted with a new and strange physical body. Beverly, a pediatrician, has given an excellent account of the physical development forced upon the adolescent:

> At this period changes take place in the whole body. Apparently initiated and controlled by the glands of internal secretion, we see changes in stature, metabolism, resistance to infection, size of organs,--the heart usually doubles in size--and finally emotional development and maturing attitudes toward life. It is not uncommon to see a boy--less often a girl--grow from eight to ten inches in height in a single year. With this rapid growth, several characteristics and problems present themselves. There is awkwardness. The muscles and bones do not develop at the same rate; some muscles grow more rapidly than others. It takes several years for some boys and girls to achieve good co-ordination. This awkwardness gives rise to embarrassment. The individuals who grow rapidly are uncomfortable if they remain in the same position for more than a few minutes. The adolescent cannot stand up on his two feet like a gentlemen!...The rapidly growing adolescent boy or girl becomes fatigued easily. Many high school students are too tired to study at night.[1]

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[1]B. J. Beverly, In the Defense of Children (New York: John Day, 1941), p. 169.

This rapid rate of growth brings on many problems to teenagers. The increase in the size of the various parts of the body causes the individual to lose the kinesthetic sense previously possessed which results in an outward show of climsiness just at the time when grace and poise are most desired. The enormous energy requirements of active, growing children demand a greater food intake than was previously needed with the result that the youngsters seem to be always hungry and sometimes overlook the necessity of practicing the proper table etiquette which was formerly learned.

To parents who are not familiar with the physical and emotional drives taking place within adolescents, these children seem to be living contradictions. On the one hand, the emotional craving for social experiences and the desire for strenuous physical activities demand that the youngsters be constantly active with others of that age group while, paradoxically, the increased rate of metabolism requires much rest and time for relaxation. To many parents it is difficult to understand why a child must be transported a few city blocks because of the physical exertion required and who will then diligently engage in such active sports as tennis or swimming for two or three hours with apparent tirelessness. Another source of amazement to parents is the child'a ability to sit for hours while being enthralled by a novel of adventure or romance and yet seemingly lose all self-control when asked to sit quietly and engage in

conversation when elders are visiting.

These, of course, are merely symptons of the continual conflict that is occurring within the adolescent. The craving for social activity is satisfied only by associating with boys and girls of ages comparable to that of the youngster. An adult's standards of social experience is too confining for most youngsters because of the lack of physical activity, while work, the chores assigned by adults, lack interest because it provides little challenge for the development of creativeness and promotes but a slight sense of achievement. Too, youngsters are highly emotional during this stage and are prone to magnify the degree of importance of events, Any disappointment becomes a tragedy and small joys result in ecstasy. Mild irritations engender expressions of violent hate while infatuation becomes a serious romance.

The highly unstable conditions of adolescents makes it extremely important that education provide for emotional and physical outlets. Taber has stated that the importance of adolescence as a cause of school drop-outs should be explored at greater length than it sometimes is:

> For instance, some youngsters are accelerated in physical and social growth, and therefore are out of step. Some are socially immature, and this is accentuated at the high school level. Adolescents are highly volatile and highly sensitive and, therefore, are especially vulnerable to personality clashes. In adolescence we have a very natural rebellion against control and against compulsion, and there is often a bursting of bonds. There is also in this age group a surge for independence, a healthy kind of thing in that they want to test

themselves out, try their own wings, and win recognition as adults.[1]

The desire for recognition as being a factor for students doing mediocre work has also been shown in the study by Bond previously mentioned.[2] One of the five basic reasons given by the two hundred students interviewed was the lack of desire for good grades because of satisfaction with poor work and the feeling that high marks were not worth the effort. In the words of the adolescents, "Why should we knock ourselves out?". Perhaps the methods of recognition now used are not adequate inducements for superior work in the eyes of the students. More probably, there is a lack of appreciation and knowledge of the purpose of the subjects being studied by the pupils. Briggs clearly states the obligation of educators and administrators to students in this respect:

> Supervision in the secondary school has a responsibility to lead teachers to make pupils appreciative of the value of what they learn and its opportunities for later use. Failure in this is due not so much to the fact that the courses offered are not good for some individuals as that they are not the best for all who are required, encouraged, or permitted to take them. Supervision has a responsibility for providing that education be adapted not merely in method, but also in content to the widely divergent individual differences in ability, aptitudes, interests, and probable needs.[3]

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[1] Coon, op. cit., p. 22.

[2] Cf. p. 19.

[3] Thomas H. Briggs, Improving Instruction (New York: The Macmillan Company, 1938), p. 42.

If the rate of drop-outs from high school is to be decreased, administrators and teachers must help the youngsters toward greater appreciation of the subjects studied by pointing out the unique value of each subject to society as well as the personal opportunities to be gained by the pupils from each. Good guidance in the proper selection of courses and better methods of providing for the gregarious needs of the youngsters in the classroom are needed rather than merely providing extra-curricular activities for unrelated social and physical outlets. This would indicate the need for a program where group planning and group work could be integrated with group play activities to fit the educational tastes and mental comprehension of the teenagers.

Another factor responsible for youngsters quitting school is the lack of finances to provide for the necessities of adolescents during the period of adjustment.

Financial reasons. The feeling of belonging is vital to adolescents. To teenagers, to be "different" is synonymous to being exiled. Each student must dress as nearly the same as his classmates as possible, be seen at the approved places and even imitate in speech and mannerisms the social leader of the group. Fads, including those of dress, of hair style, and of group cliches, must be diligently followed to remain in good standing with school friends.

Many students cannot financially afford to dress as

the current fad dictates and to frequent the approved places of amusement as often as is considered fashionable. School may seemingly become a constant struggle to make limited finances meet the never ending obligations of adolescent demands.

From a study of 957 drop-outs studied by Dillon, 21 per cent gave financial reasons as the cause for leaving school. This included 15 per cent who needed money to buy clothes and help at home and 6 per cent who wanted spending money.[1] Although this may seem to be a rather high rate of students leaving school, Knight has shown that as the economic status of the American people has improved, the children have enjoyed the advantages of more years of schooling due to the greater holding power of the schools.[2] Furthermore, this effect is particularly noticeable in increases in enrollments in the secondary schools where many of the drop-outs had been caused by low economic status of families.

III. FAILURES AS A LOSS TO SOCIETY

The degree and quality of the education of individuals is largely determined by the purpose for which those persons

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[1]Harold J. Dillon, Early School Leavers, (New York: National Child Labor Committee, 1949), p. 50.

[2]Edgar W. Knight, Fifty Years of American Education (New York: The Ronald Press Company, 1952), p. 51.

are being educated. For example, those people who are being educated for the benefit of the state will have a much different curriculum to follow than those students being prepared to become well adjusted citizens in a democratic form of government. The former will require that each future citizen be especially well prepared for the specific, highly specialized role in life to which that person is dedicated. The democratic citizen, however, must be well prepared in many fields in order to intelligently participate in the various phases of government as well as to secure a livelihood in an economy based upon competitive enterprise.

As an example of education for a state's benefit, Russia requires that students pass the following subjects: Russian grammar, Russian Literature, arithmetic, geometry, trigonometry, biology, history, constitution, geography, physics, chemistry, geology, astronomy, foreign language, drawing, physical culture and military affairs.[1]

In contrast, the secondary schools of the United States now offer numerous courses in English, ancient languages modern languages, sciences, mathematics, social studies, music, arts and crafts, homemaking, industrial arts, agriculture, business education, and health and physical education.[2]

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[1]George H. Classen, "Big Red Schoolhouse," Scholastic Teacher, LXVIII (February 23, 1956), 5T

[2]Reeder, op. cit., p. 576

A further difference is noted in the liberal approach of education in a democracy as to that required in a totalitarian state. Reeder says of American education:

> In fact, in many of the larger secondary schools a pupil could attend school for a large part of his lifetime, pursue a normal program of study, and not have to repeat a subject.[1]

Secondary education in Russia, however, is very definite:

> It is true that the basis for the schooling of Soviet engineers and technicians is laid in the high schools. A Soviet high school graduate has had five years of chemistry, six to seven years of physics, five years of algebra and geometry (including stereometry and trigonometry). There are no elective subjects in Soviet schools.[2]

Obviously, the education of an individual for successful citizenship in a democracy is a much more difficult task for the educational institutions than is the preparation of a highly specialized technician such as that required by governments where the citizen is subordinate to the state.

Bullis has stated clearly the dual role which education must accomplish in the United States to produce highly educated citizens:

> A highly educated man has been educated at two levels: first he has a practical understanding of modern technology, is able to forsee its developments and their economic and sociological impact on modern society.

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[1] Ibid.

[2] Classen, loc. cit.

> Second, he has been tutored in humanistic values. His knowledge of history, economics, religions, sociology, and psychology must be so thorough that he can evaluate change in terms of continuing human progress rather than as a threat to human stability.
>
> At the same time he must be so mentally flexible that he can avoid at all times the psychic shock that too often comes with changes. He must be able to accept new techniques and precedent destroying discoveries without discarding the valid experiences of the past. Rather he must be able to re-examine historic contributions to human progress and relate them to current thinking and technological advance. The ability constantly to reappraise the factors of civilization in terms of progress is the mark of the intellectually and emotionally mature man.[1]

Although both humanistic values and modern technology are necessary for the preparation of well adjusted citizens, neither should be presented separately. To apply technology without regard to its effect upon society could be catastrophic, but to possess wisdom of ethical conduct without vocational knowledge would also be futile in a competitive economic system. As Ulich as aptly suggested:

> Education deals with the development of the intellectual powers of men. Their moral and spiritual powers are the sphere of the family and the church. The prime object of education is to know what is good for man. It is to know the goods in order. As if there had ever been a school of high quality and, may we add, a "Great Tradition", which divorced the learning and knowing from the practical moral commitment! Why else did our modern liberal education fail?

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[1]Harry A. Bullis, "The Future Belongs to the Educated Man", The Saturday Review (January 21, 1956), p. 11.

> Narrow vocationalism is a frightening period to our schools, often nothing but an excuse for mediocrity. But more intellectualism would be just as great a danger. The "good men" and the "good life" do not come from it. As little as we should have foul compromise, as little do we need artificial separation. We need genuine synthesis.[1]

Humanistic values, then, should be integrated with vocational teaching in order to produce an intelligent citizenry which possess both empathy with society and the knowledge for its advancement. If a society is to be strong, it must have wise leaders and intelligent citizens. These citizens should be concerned with the workings of the government and the welfare of the members as well as the improvement of material conveniences which that organization can create. Only by adequate and proper training can such individuals be produced. If the holding power of schools is decreased through numerous failures and the consequent drop-outs, the whole level of that society could conceivably deteriorate. As more and more of its citizens regress intellectually and acquire a lesser degree of comprehension of the obligations required for good citizenship, indifference to both the government and the welfare of that society might result. This danger has been well expressed by Fenton:

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[1]Robert Ulich, "A Liberal Education for All," The Saturday Review, XXXVI (September 12, 1953), p. 28.

> If there is any basis at all for pessimism regarding the effectiveness of democratic principles of government in everyday life, it may be attributed to the lack of interest in public affairs of the ordinary citizen, who has been expecting too much of the functionaries of democratic forms of government and assuming too little personal responsibility. Efforts to reduce the economic and human costs of delinquent behavior will never succeed until problems of school and community morale and the general welfare of children become the personal concern of conscientious citizens as well as the routine responsibility of paid public officials.[1]

Since a democracy is based upon self-government, it would seem that all people living under such a system would be especially anxious to insure that all future citizens should be as well educated as the public educational system would permit. Investigation over a period of years, however, has shown that of one thousand children in the fifth grade in 1906, only 139 were graduated from high school in 1914; but of that number in that grade in 1934, about 467 were graduated from high school in 1942.[2] Although this shows an improvement in the holding power of the schools, much still remains to be done to insure the completion of the education of the 53.3 per cent who have not graduated.

Ironically, those students who are most maladjusted socially and who are in greatest need of guidance are the very individuals who frequently leave school. The influx of

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[1]Norman Fenton, Mental Hygiene in School Practice (Stanford: Stanford University Press, 1951), p. 386.

[2]Edgar W. Knight, Fifty Years of American Education (New York: The Ronald Press Company, 1952), p. 51.

such persons into a democracy will cause a corresponding weakening of its capabilities in comparison to its possible potentialities had all its members received adequate education. Green has expressed the importance of good guidance in building a sound society:

> Correct guidance, if generally practiced, would pay big dividends in a more effective society and in happier and better adjusted individuals. Not everyone requires assistance in making the required adjustments to life, but those who do usually need it badly. All agencies engaged in rendering social service face a definite responsibility for the development of a sane and comprehensive guidance program.[1]

If American democracy is to attain to its greatest degree, this loss to society, due to the retardation and elimination of students from its educational institutions, must be prevented. School administrators, teachers and educators must all diligently and intelligently seek a solution to the problem. The American public should guard its human resources as zealously as it now practices the conservation of its natural resources. Then, and only then, can public education be truly called "public" from the standpoint of both financial and moral support. Only when every citizen in America has received an education suitable to that individual's mental social, and vocational capacities, can the educators and the

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[1]Harry Green, Albert Jorgensen, and J. Raymond Gerberich, Measurement and Evaluation in the Secondary School (New York: Longmans, Green and Company, 1951), p. 270.

public alike be congratulated for having won a difficult, educational victory.

CHAPTER III

NINTH GRADE STUDENT FAILURES AND DROP-OUTS

In order to determine whether the practice within the Newton Public High School reflected a premise of education of failure reduction, it was necessary to review the academic records over a definite period of time. A careful study of all ninth grade students' records was made for four years at the beginning of the thirty year period from 1926-56 and compared with the five years at the end of the period. From this study was obtained data which included: (1) the per cent of the total number of boys and girls who had failed in each of the various subjects, (2) the per cent of the total number of boys and girls who had dropped subjects without completing them, (3) which of the subjects offered contained the greatest percentage of failures.

I. DEFINITIONS OF TERMS USED

Percentage of failures. The percentage of failures for boys and girls in each subject studied was determined by multiplying by one hundred the ratio of the number of failures in each respective subject to the total number of students enrolled.

Average. All averages are the arithmetic mean of the terms involved.

II. FINDINGS

After carefully studying the records of the ninth grade students for the period being considered, data were compiled in order to determine in which subjects the greatest percentage of failures occurred and the period in which the greatest percentage of failures and drop-outs occurred. The results of these findings were summarized according to subject areas.

Algebra. The results of the study of the percentage of student failures in Algebra are shown in Figure 1. The average percentage of boys failing in the period from 1926-30 was 14.5, while the percentage of girls failing in the same period was 9.0. In the period from 1951-56, the percentage of boys failing was 4.2, while the percentage of girls failing was 4.1. The data found show that, except for the years of 1951, 1952, and 1953, the percentage of failures in Algebra was higher among the boys than the girls.

The average percentage of failures of both boys and girls for the period of 1951-56 was 4.2, while, using the same method of computation for the period of 1926-30, it was 11.6 per cent. This indicated that 7.4 per cent more students failed Algebra at the beginning of the thirty year period than failed at the end of the same period.

Latin. Latin was offered to all ninth grade students

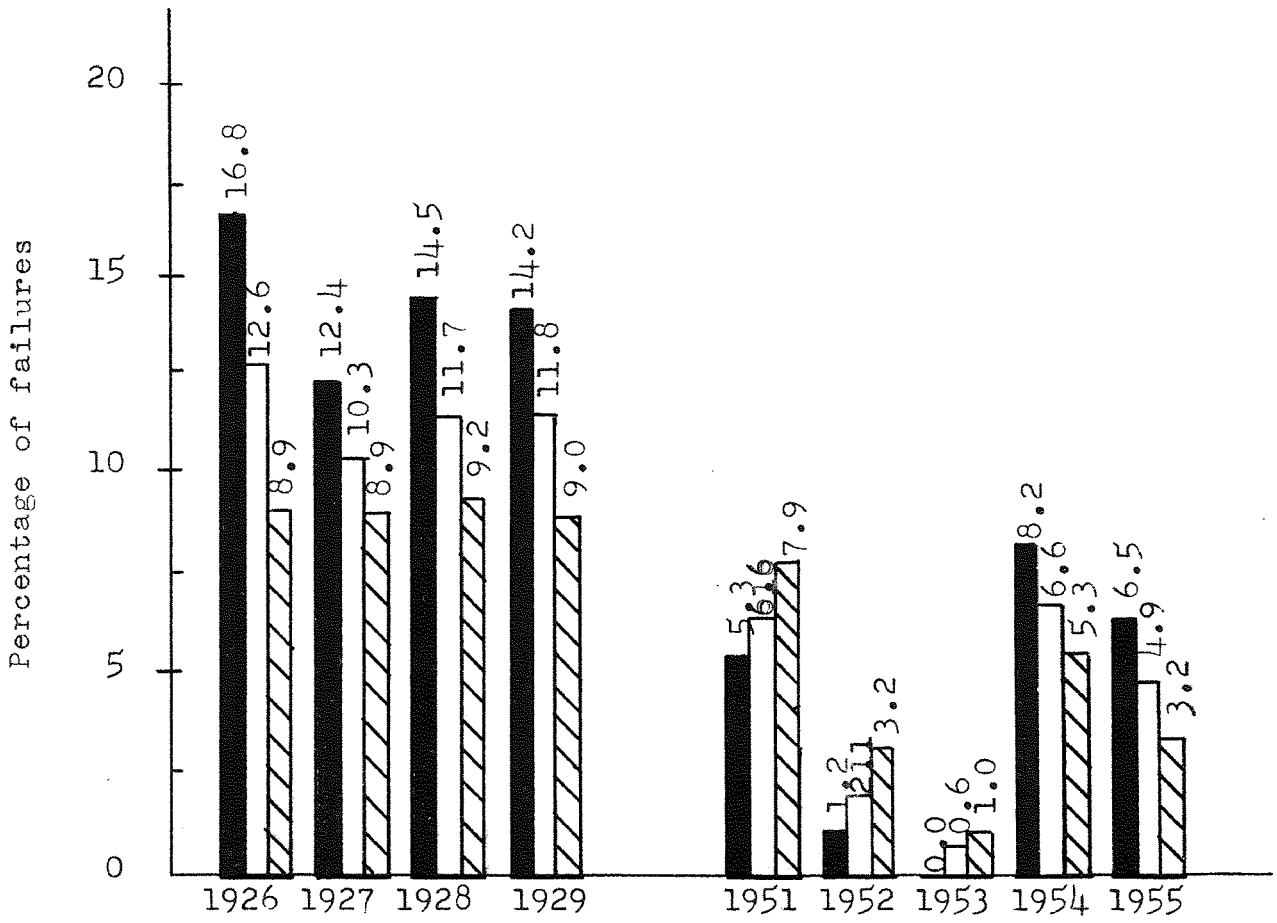

FIGURE 1

COMPARISON OF STUDENT FAILURES IN ALGEBRA FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

as an elective subject each year of the period studied. The data shown in Figure 2 indicated the percentage of failures of all ninth grade students enrolled during the periods from 1926-30 and 1951-56.

The most failures, 13.8 per cent, occurred during the 1929-30 school year and the fewest failures, 0.0 per cent, were received in the 1952-53 school term. The next highest percentage of failures were given in the 1926-27 school term and 1954-55 had the second fewest failures.

More boys, 14.7 per cent, failed in Latin in the 1926-30 period than girls, 10.2 per cent; but in the 1951-56 period more girls, 1.5 per cent, received failing grades than did the boys, 0.0 per cent.

A greater percentage of students failed, 12.8 per cent, at the beginning of the thirty year period than at the end of this same period, 1.2 per cent. This indicated that 10.8 per cent more students failed Latin from 1926-30 than in the period from 1951.56.

English. All ninth grade students were required to successfully complete a course in English before being permitted to graduate. The data found in Figure 3 were compiled from the academic records of students classified as being in the ninth grade. These students were enrolled in various courses in English such as: 9A English, 9B English, 10B English and Commercial English.

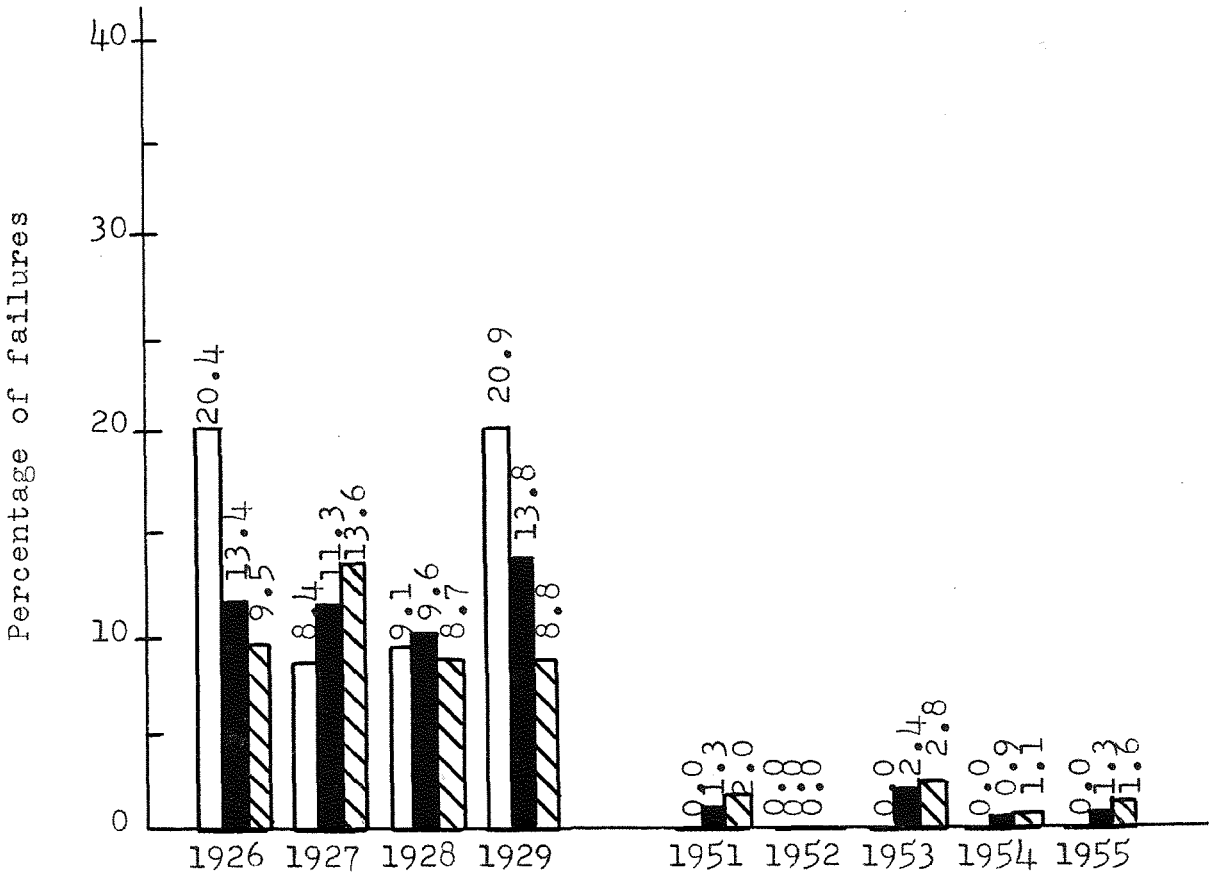

FIGURE 2

COMPARISON OF STUDENT FAILURES IN LATIN FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

The greatest percentage, 8.7, of student failures in English courses occurred in 1927-28, and the smallest percentage of failures, 9.7, was found in the data for the 1953-54 term.

The greatest percentage of boys, 11.6, failed an English course in 1926-27, and the smallest, 4.4 per cent, in the 1953-54 terms.

The greatest percentage of failures by girls, 8.7, was found in the data for 1927-28, with the smallest group earning failing grades, 0.4 per cent, in the 1955-56 period.

A higher percentage of boys received failing marks in English courses than did girls in both the 1926-30 period and the 1951-56 period.

The arithmetic mean of the "Average percentage for year" in Table III was 7.1 per cent for the 1926-30 period and 2.9 per cent for the 1951-56 period.[1] This was a decrease of 4.2 per cent in the proportion of failures between the beginning and end of the thirty year period.

History. In the period from 1926-30 in the Newton Public High School, ninth grade students had a choice of taking World History, Ancient History or Modern History to satisfy the requirements for graduation. In the second semester

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[1]Appendix, Table III.

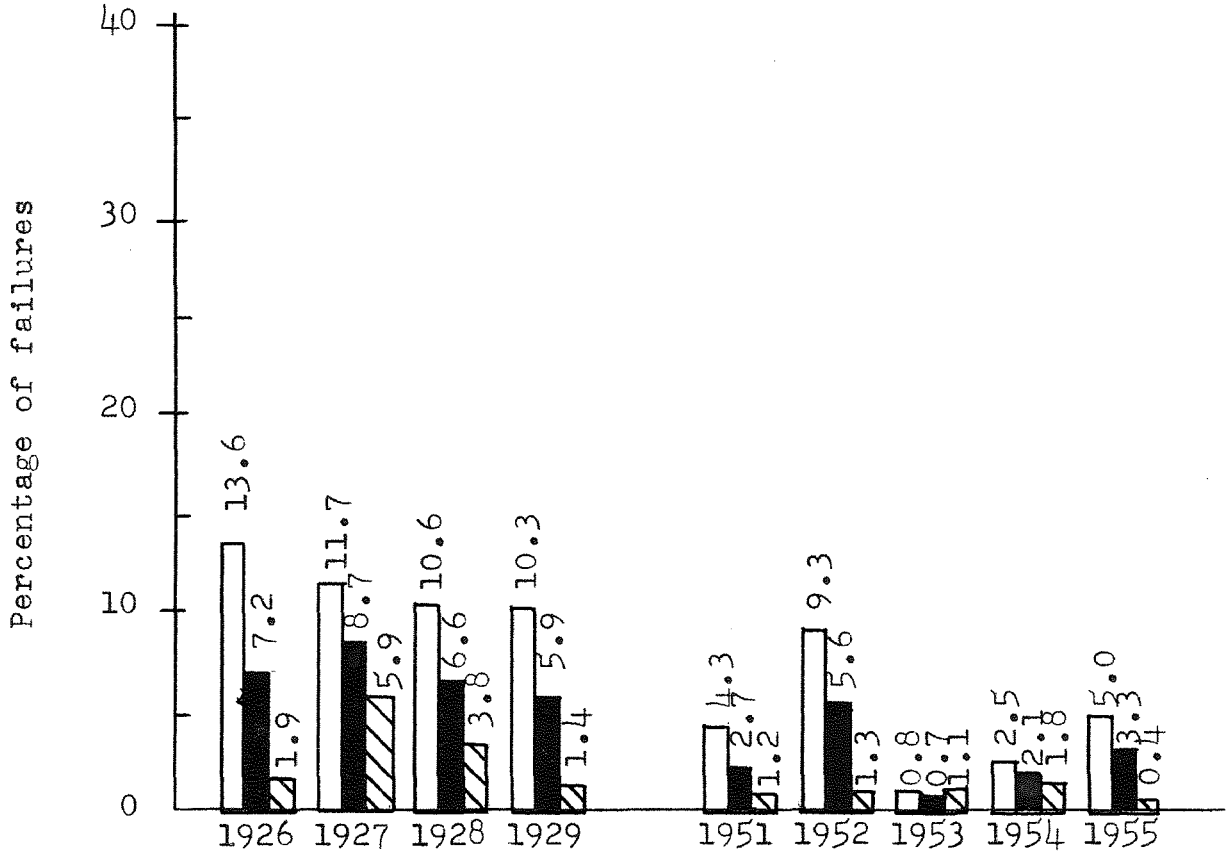

FIGURE 3

COMPARISON OF STUDENT FAILURES IN ENGLISH FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

BOYS AVERAGE GIRLS

of 1951-52 no girls were enrolled in History courses as ninth grade students, but received this training in the tenth grade. This principle was applied to both semesters of the years from 1952-to 1956 inclusive as was indicated in Figure 4.

The arithmetic mean of the percentage of failures of boys in History from 1951-56 was 0.9 per cent, but the arithmetic mean of the percentage of failures from 1926-30 was 4.27. This amounts to a reduction in failures of 3.37 per cent in the thirty year period.

The percentage of failures among girls, 1.7 per cent, was less than that received by the boys, 4.27 per cent, in the period from 1926-30. The greatest number of failures occurred in the school year of 1928-29 with an average of 4.7 per cent and the least number of failures with both boys and girls was found to be in the previous year, 1927-28.

The arithmetic mean of "Average percentage for year" was 2.8 per cent for 1926-30 and 0.9 per cent for 1951-56.[1] This was a reduction of 1.9 per cent

General Mathematics. Mathematics was a required course for all ninth grade students. By using tests to determine the superior mathematical students, some pupils were permitted to pursue Algebra rather than General Mathematics from

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[1]Appendix, Table IV.

1951-56. Prior to this, Elementary Accounting and Commercial Arithmetic were offered as optional courses to ninth grade students. No courses comparable to General Mathematics were offered from 1926-27 and the second semester of 1927-28.

A higher percentage of boys, 11.5 per cent, received failing grades from 1951-56 than did the girls, 9.4 per cent when the arithmetic mean of the "Average per cent for year" of each was computed.[1] This same method of computation revealed that a higher percentage of the class failed in the 1927-30 interval, 19.9 per cent, than failed in the 1951-56 interval, 10.8 per cent. This showed a reduction in failures of 9.1 per cent fot these two periods.

The information in Figure 5 indicates that the greatest percentage of class failures, 18.1, occurred in 1951-52 with the second highest percentage, 15.0, in 1929-30. In 1928-29, 1951-52, and 1954-55, the percentage of failures among the girls exceeded that of the boys.

General Science. Only those students who had not previously had a course in General Science in the Junior High School were required to take this course in High School. The data compiled in Figure 6 showed that in 1926 no boys failed in General Science, but that 4.3 per cent of the girls enrolled.

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[1]Appendix, Table V.

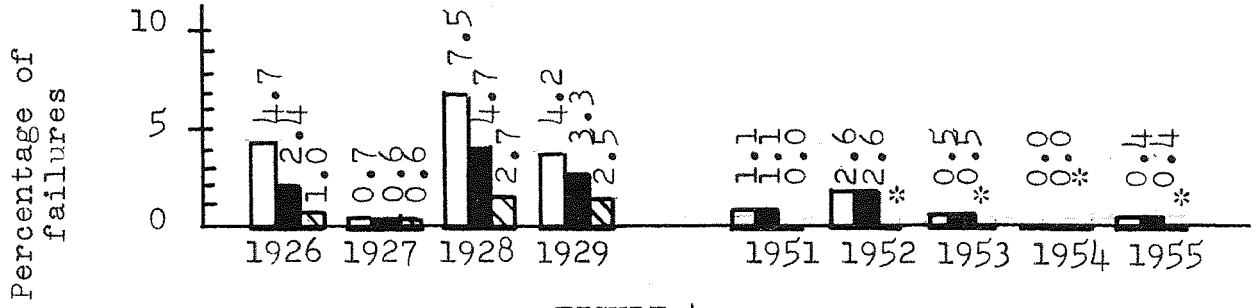

FIGURE 4

COMPARISON OF STUDENT FAILURES IN HISTORY FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

BOYS AVERAGE GIRLS

* No girls enrolled in History during these semesters.

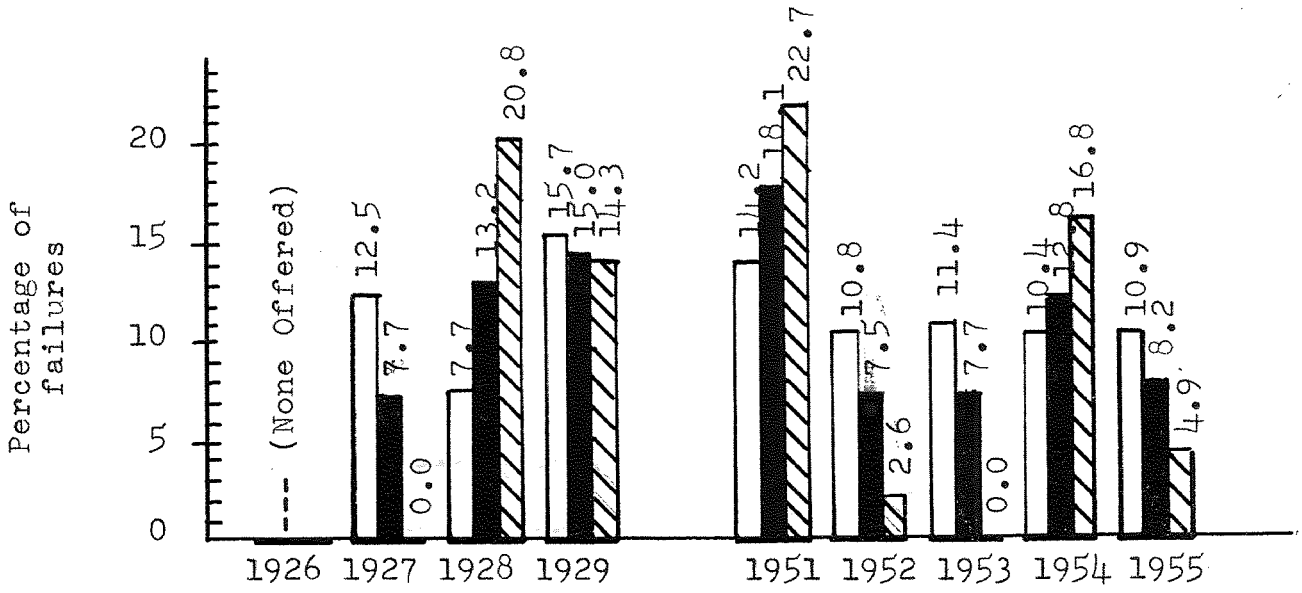

FIGURE 5

COMPARISON OF NINTH GRADE FAILURES IN GENERAL MATHEMATICS, ELEMENTARY ACCOUNTING, AND COMMERCIAL ARITHMETIC FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

BOYS AVERAGE GIRLS

at this time received failing grades.

In 1927-28 and 1929-30 there were no failures recorded for either boys or girls. The highest percentage of failures occurred in the 1953-54 school term among the girls, 7.1 per cent, and the next highest percentage of failures, 5.4 per cent, also were received by the girls in the 1928-29 period.

The highest percentage of failures among the boys was 4.7 per cent in 1955-56 with the next highest percentage of failures received by the boys, 4.6 per cent, occurring in the 1951-52 school year.

The arithmetic mean of the 1926-30 period indicated that 1.4 per cent of the students enrolled in General Science received failing grades at the beginning of the 1926-56 period while the arithmetic mean of the 1951-56 period was 3.3 per cent. This indicated an increase of 1.9 per cent in the percentage of failures during the beginning and end of the thirty year period.

Vocational Agriculture and related subjects. As seen in Table I there were no failures on Vocational Agriculture from 1951-56. The arithmetic mean of "Average percentage for year" of the 1926-30 period was 10.0 per cent.

The data in Figure 7 shows that the highest percentage of failures in farm courses occurred in 1926-27 with the next highest percentage in 1927-28.

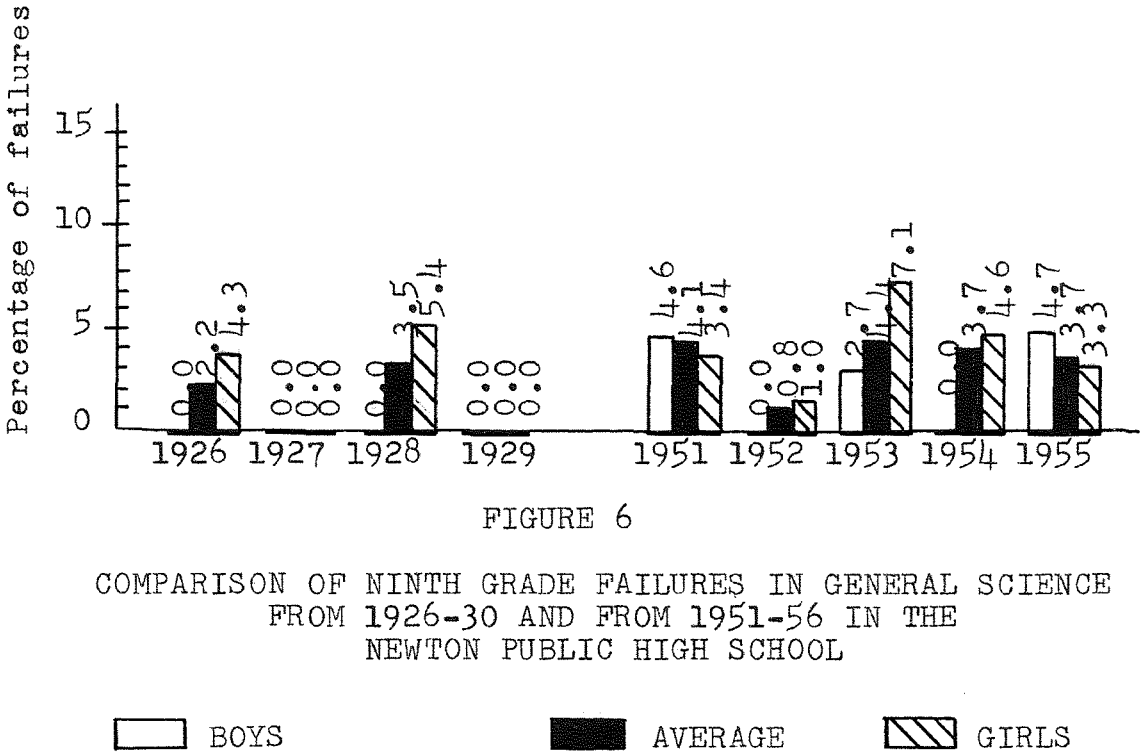

FIGURE 6

COMPARISON OF NINTH GRADE FAILURES IN GENERAL SCIENCE FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

TABLE I

PERCENTAGE OF FAILURES IN VOCATIONAL AGRICULTURE, FARM SHOP, AND FARM CROPS OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of boys failing	Average Percentage for Year	Period Studied	Subject
0.0	0.0	1st Semester 1955-56	Vocational
0.0		2nd Semester 1955-56	Agriculture
0.0	0.0	1st Semester 1954-55	Vocational
0.0		2nd Semester 1954-55	Agriculture
0.0	0.0	1st Semester 1953-54	Vocational
0.0		2nd Semester 1953-54	Agriculture
0.0	0.0	1st Semester 1952-53	Vocational
0.0		2nd Semester 1952-53	Agriculture
0.0	0.0	1st Semester 1951-52	Vocational
0.0		2nd Semester 1951-52	Agriculture
7.6	8.4	1st Semester 1929-30	Farm Crops
9.1		2nd Semester 1929-30	Farm Crops
0.0	0.0	1st Semester 1928-29	Farm Crops
0.0		2nd Semester 1928-29	Farm Crops
15.4	11.6	1st Semester 1927-28	Farm Shop
7.7		2nd Semester 1927-28	Farm Shop
20.0	20.0	1st Semester 1926-27	Farm Shop
---		2nd Semester 1926-27	---- ----

--- No farm course offered this period.

Homemaking. No homemaking courses were offered to ninth grade girls in the 1926-27 and 1927-28 school terms.

The arithmetic mean of the "Average Percentage for year" found in Table II was .9 per cent for 1951-56 and was 1.9 per cent for the 1926-30 period. This was a reduction of 1.0 per cent in failures for the thirty year period.

The greatest percentage of failures was received in 1929-30 and the smallest percentage of failures occurred in 1954-55 and 1955-56. This is shown graphically in Figure 8.

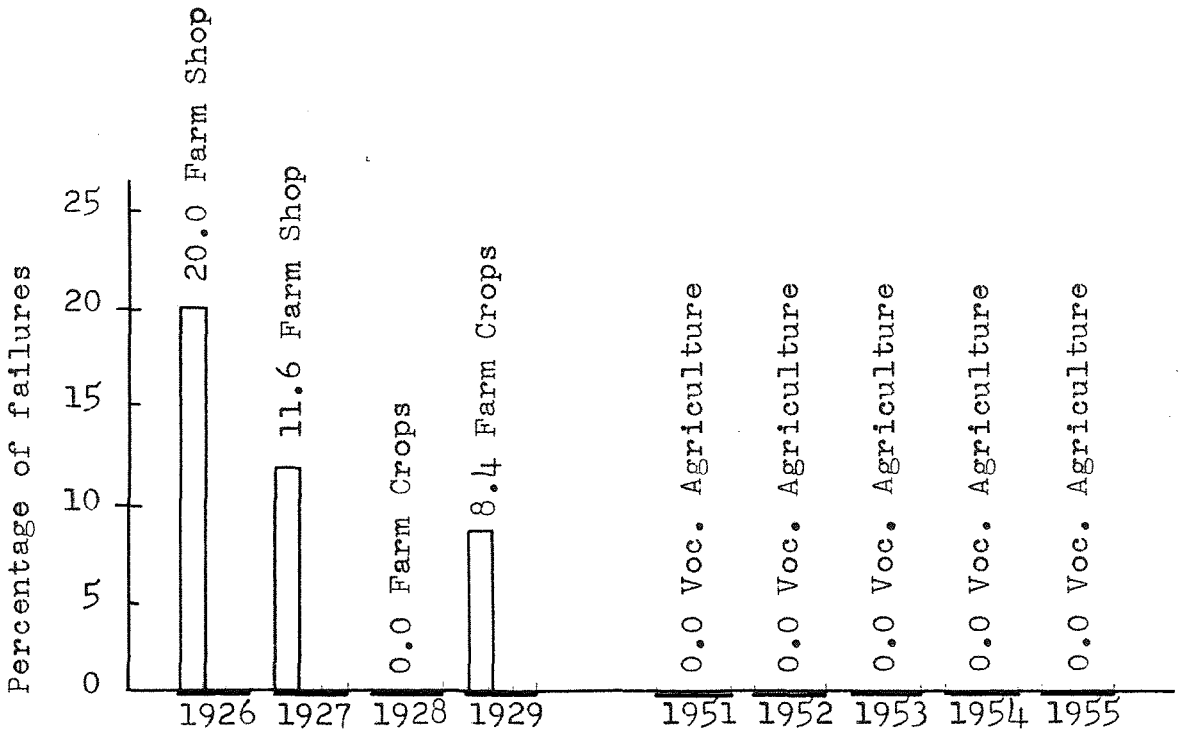

FIGURE 7

COMPARISON OF STUDENT FAILURES IN VOCATIONAL AGRICULTURE AND RELATED SUBJECTS FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

TABLE II

PERCENTAGE OF FAILURES IN HOMEMAKING OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Girls Failing	Average Percentage for Year	Period Studied
0.0	0.0	1st Semester 1955-56
0.0		2nd Semester 1955-56
0.0	0.0	1st Semester 1954-55
0.0		2nd Semester 1954-55
2.2	1.1	1st Semester 1953-54
0.0		2nd Semester 1953-54
1.7	2.2	1st Semester 1952-53
2.7		2nd Semester 1952-53
0.8	1.2	1st Semester 1951-52
1.6		2nd Semester 1951-52
2.4	3.4	1st Semester 1929-30
5.3		2nd Semester 1929-30
0.0	0.4	1st Semester 1928-29
0.8		2nd Semester 1928-29
---	---	1st Semester 1927-28
---		2nd Semester 1927-28
---	---	1st Semester 1926-27
---		2nd Semester 1926-27

--- No Homemaking offered during this semester

Art. In recent years the Newton Public High School offered art as an optional course to ninth grade students. This course was not available to the students in the 1926-30 year period, however.

The greatest percentage of failures among the boys was found to be 8.5 per cent during the 1955-56 school term.[1] This

[1] Appendix, Table IX.

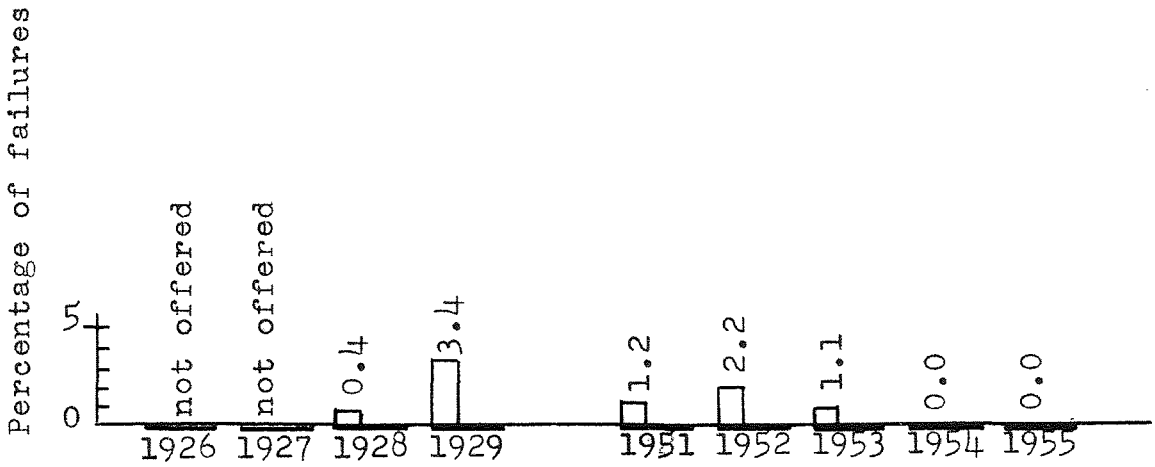

FIGURE 8

COMPARISON OF NINTH GRADE STUDENT FAILURES IN HOMEMAKING FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

percentage of failure exceeded that of the girls during the same period by 7.5 per cent, as may be seen in Figure 9. This was the greatest difference between the percentage of failures of the boys and girls in the periods studied.

The second greatest percentage of failures in Art by boys was made in the 1951-52 school year. During this period, 6.4 per cent of all boys enrolled in Art received failing grades and a high percentage of girls also received failing marks during this same year. Of the total number of girls enrolled in Art during the 1951-52 academic year, 3.25 per cent made failing grades. This was a difference of 3.15 per cent. There were no failures by boys or girls in Art in 1952-53 nor 1953-54.

The arithmetic mean of the "Average percentage for year" indicated that the percentage of failures among the boys, 3.2 per cent, was greater than that of the girls, 0.9 per cent.[1]

General Shop and related subjects. General Shop was not offered as a separate course to ninth grade boys in the period from 1926-30 in the Newton Public High School, but was given as part of such courses as "Trades and Industry" or "Carpentry". Mechanical Drawing was also given during the years of 1928-29, 1929-30, and 1951-52.

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[1] Appendix, Table IX.

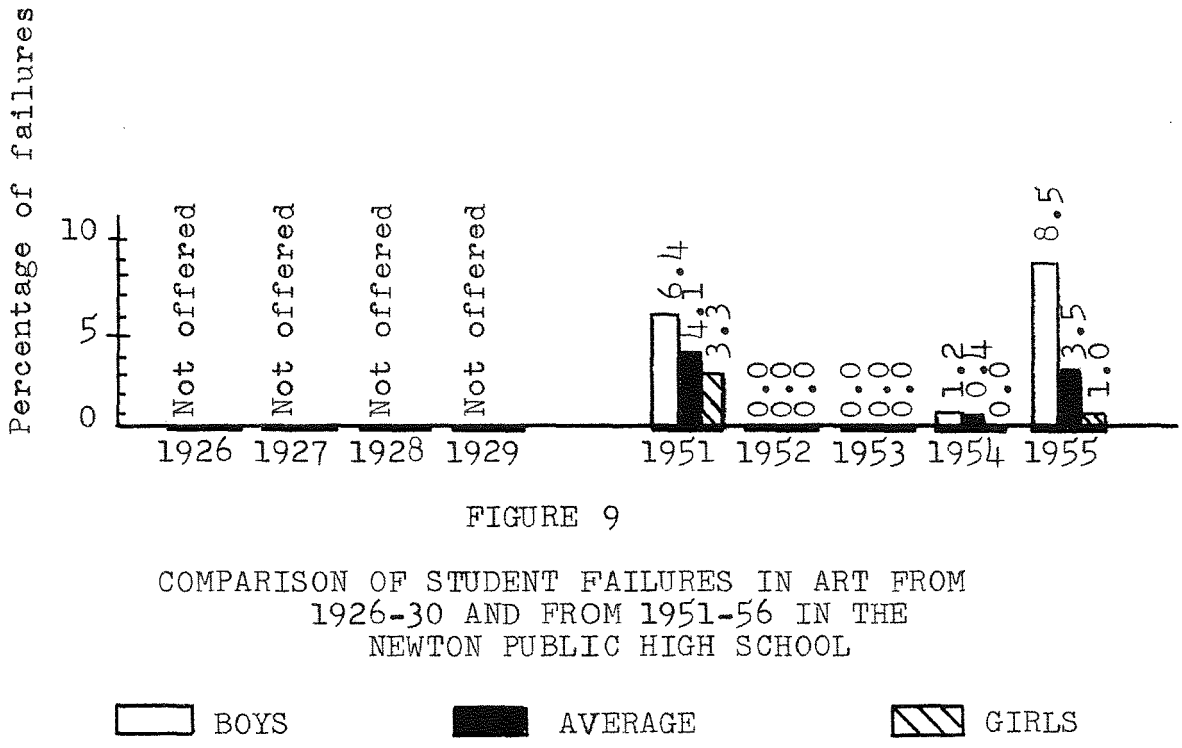

FIGURE 9

COMPARISON OF STUDENT FAILURES IN ART FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

In 1951-52 a complete course consisting of two full semesters of Mechanical Drawing was given as an optional course for all ninth grade male students. According to the data in Figure 10, there were no failures among the ninth grade boys enrolled in General Shop from 1951-56.

The arithmetic mean of "Average per cent for year" for the 1926-30 four year period was 5.4 per cent and, since there were no failures in the 1951-56 period, this indicated a reduction of failures by 5.4 per cent between the two periods studied for comparison over the thirty year period.[1]

Figure 10 shows graphically that the greatest percentage of failures occurred in 1929-30 although the percentages of failures were rather consistent throughout the entire period from 1926-30 since all were in the 5.0 per cent or above level.

Speech and Debate. Speech and Debate courses were not offered during the 1926-30 period except for the first semester of 1927-28. There were no failures reported for the entire five years from 1951 to 1956.

Spanish and French. The highest percentage of failures in these two subjects occurred in French which was offered in the 1929-30 school term. The average percentage of boys failing was 50.0 per cent, and 12.5 per cent of the girls taking this course received failing grades. The average per

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[1] Appendix, Table X.

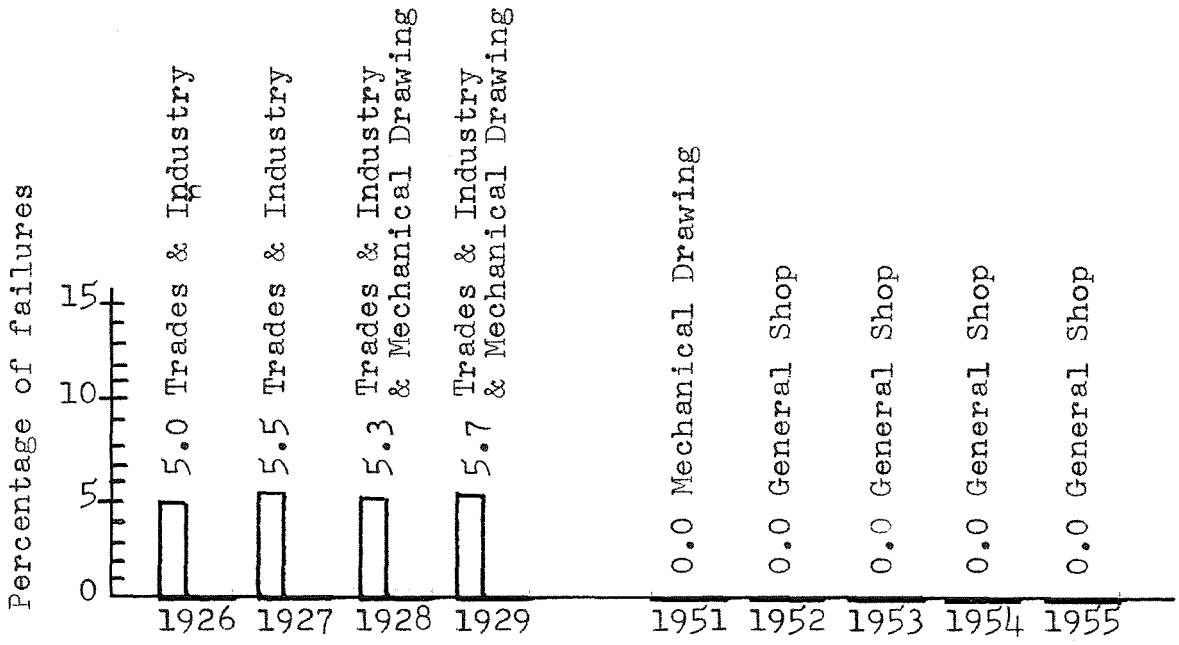

FIGURE 10

COMPARISON OF NINTH GRADE FAILURES IN GENERAL SHOP AND RELATED SUBJECTS FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

cent for the year of both boys and girls failing French was 29.0 per cent.

Data shown in Figure 11 indicate that the greatest percentage of boys failing Spanish occurred in 1927-28 with 31.0 per cent, while the greatest percentage of failures of girls occurred in 1928-29 with an average of 4.2 per cent. A greater average percentage of failures was received by boys, 28.2 per cent for the 1926-30 period, than was received by girls, 4.2 per cent. This indicated that 24.0 per cent more failures occurred among the boys taking French and Spanish than were earned by the girls during the same period.

Neither of these courses were offered during the 1951-56 period. Therefore, it was impossible to make any comparisons between the percentages of failures at the beginning and end of the thirty year period.

Junior Business. Courses in Junior Business were offered every year during the 1926-30 school terms except for the second semesters of 1929-30 and 1926-27, but none was offered during the entire 1951-56 period.

The greatest percentage of failures among boys, 20.0 per cent, occurred in the first semester of 1926-27 and the smallest percentage of failures, 4.4 per cent, was reported in the 1928-29 school year. As may be seen in Figure 12, the greatest percentage of girls receiving failing grades, 9.0 per cent, was reported in the 1929-30 school year.

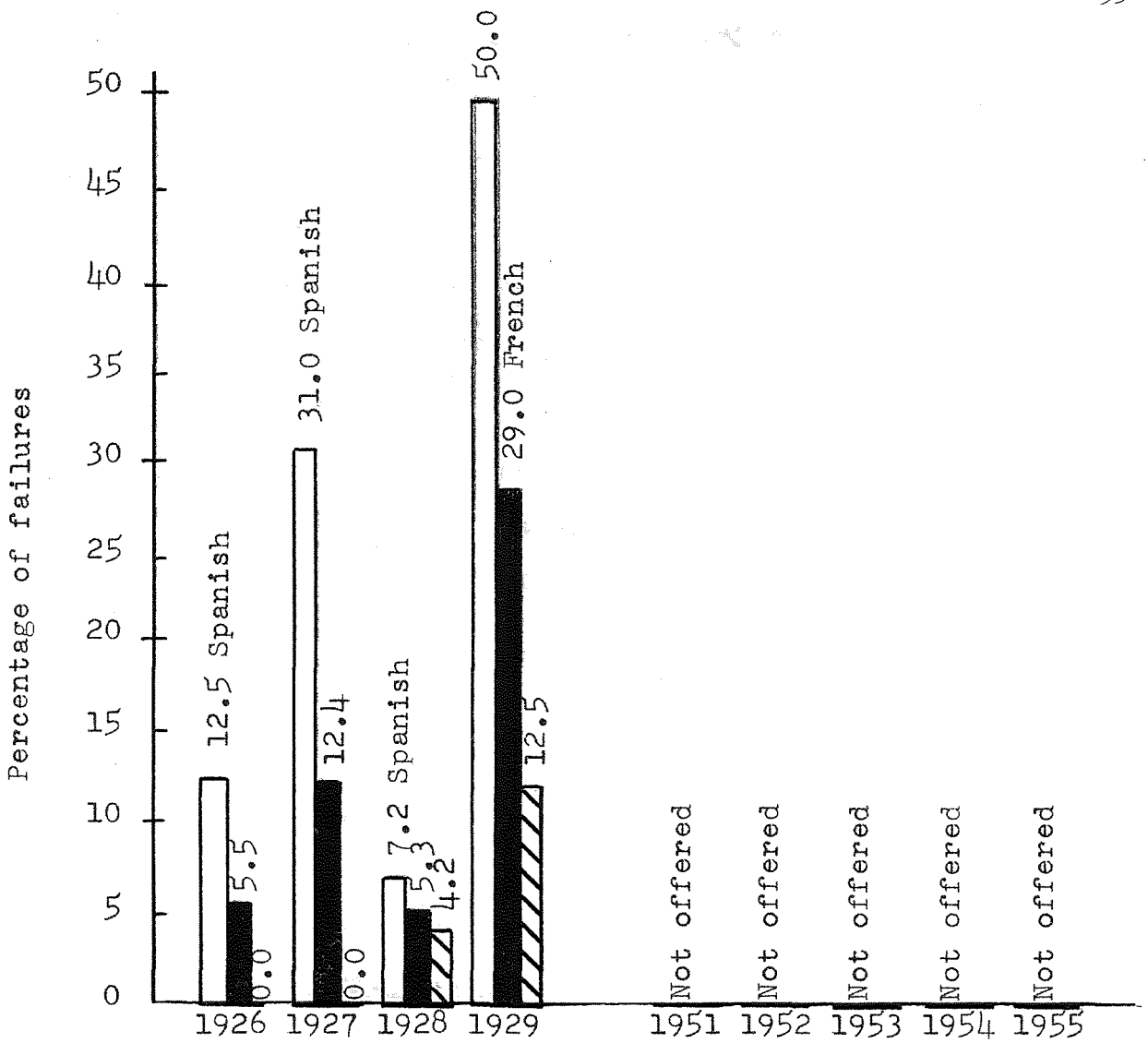

FIGURE 11

COMPARISON OF NINTH GRADE STUDENT FAILURES IN SPANISH AND FRENCH FROM 1926-30 IN THE NEWTON PUBLIC HIGH SCHOOL

No girls were enrolled in Junior Business in the first semester of the 1926-27 school year, but the average percentage of failures were the highest during this period. The smallest average percentage of failures was shown in the school year of 1928-29 with an average percentage of both boys and girls of but 2.8 per cent.

A greater percentage of boys, 12.3 per cent, received failing grades in the 1926-30 period than the girls, 4.3 per cent. This indicated that an average of 8.0 per cent more boys failed Junior Business than did the girls during the same period. The average percentage of failures for both boys and girls during this same period was 9.9 per cent.

Comparison of subject failures. A comparison of the average percentage of failures in each of the subjects studied at the beginning and end of the thirty year period may be found in Figure 13. With the exception of General Science there were fewer failures per number of pupils enrolled in each course at the end of the period, 1951-56, than there were at the beginning, 1926-30.

General Science, however, had an increase in the average per cent of failures, 1.9 per cent, from the beginning to the end of the period. The subject which contained the most failures per number of students enrolled was Spanish and French which was offered only during the 1926-30 period.

The next highest average percentage of failures occurred

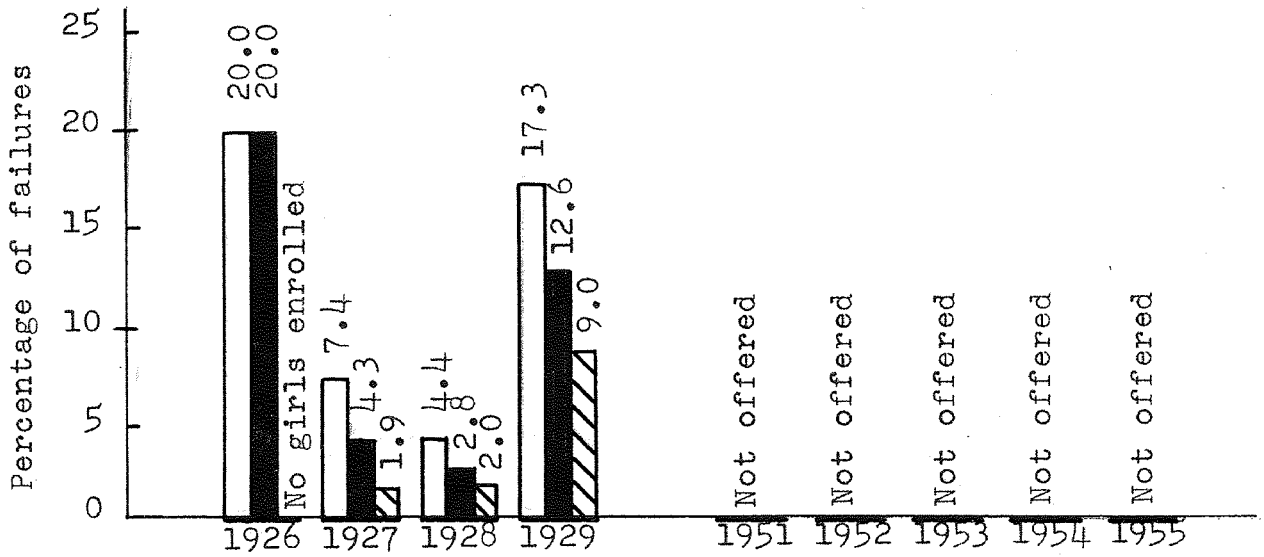

FIGURE 12

COMPARISON OF NINTH GRADE STUDENT FAILURES IN JUNIOR BUSINESS FROM 1926-30 IN THE NEWTON PUBLIC HIGH SCHOOL

in the group containing General Mathematics, Commercial Arithmetic, and Elementary Accounting with an average of 11.4 per cent of the 1926-30 and 1951-56 periods.

Homemaking had the fewest failures per the number of students enrolled, 1.4 per cent, with Art, 1.6 per cent, and History, 1.8 per cent, next in order of smallest average per cent of failures. In general, a greater percentage of failures occurred in French than in Spanish while Latin had the lowest percentage of failures in the foreign languages.

Comparison of percentage of failures with years. The average of the percentages of failures for all subjects during each year studied is shown in Figure 14. The greatest percentage of failures among boys occurred in the 1928-29 school year with an average of 44.2 per cent, while the next highest percentage of failures took place in the 1929-30 school term with an average of 43.1 per cent. The greatest percentage of failures among girls also occurred in the 1929-30 year with an average of 23.0 per cent.

The smallest percentage of failures among boys, 7.0 per cent, occurred in the 1953-54 school term, and the girls also had the least percentage of failures, 6.7 per cent, during this period. With the exception of 1951-52 and 1954-55, boys received a higher percentage of failures for all courses taken than did the girls.

Although the percentage of failures among the boys

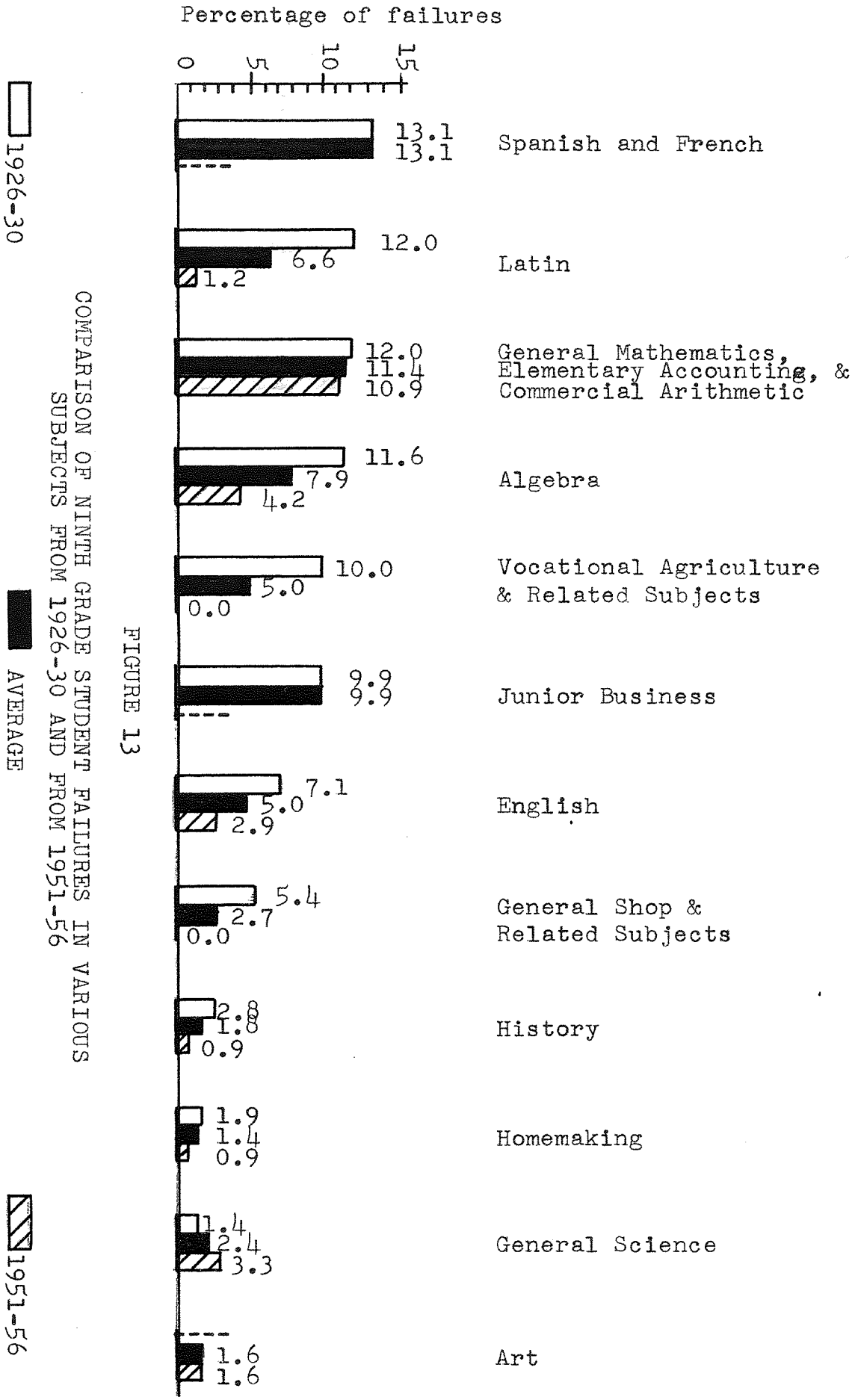

FIGURE 13

COMPARISON OF NINTH GRADE STUDENT FAILURES IN VARIOUS SUBJECTS FROM 1926-30 AND FROM 1951-56

was less for the 1951-56 period than for the 1926-30 period, the girls had a lower rate of failures in 1926-27 than in 1951-52. The average of the girls' percentage of failures in the 1951-56 period, however, was less than that for the 1926-30 period.

Percentage of subjects dropped. The average percentage of subjects dropped during the periods 1926-30 and 1951-56 is illustrated in Figure 14. The greatest percentage of subjects not completed by boys occurred in 1929-30 and was 41.3 per cent of the subjects for which they were enrolled at that time. In 1955-56 the smallest per cent of subjects, 1.5 per cent, was dropped. This indicated a decrease of 39.8 per cent in the average per cent of subjects not completed between these two periods.

The greatest percentage of subjects not completed by girls occurred in 1938-39 with 28.4 per cent of the subjects not being completed during this year. The smallest percentage of uncompleted subjects, 2.2 per cent, occurred in 1955-56.

During the 1926-30 period, the smallest percentage of uncompleted subjects of 16 per cent was recorded in 1926-27. This indicated a trend during this period of increasingly larger percentages of uncompleted courses until 1929-30 for the boys and until 1928-29 for the girls.

During the 1951-56 period the girls' percentage of

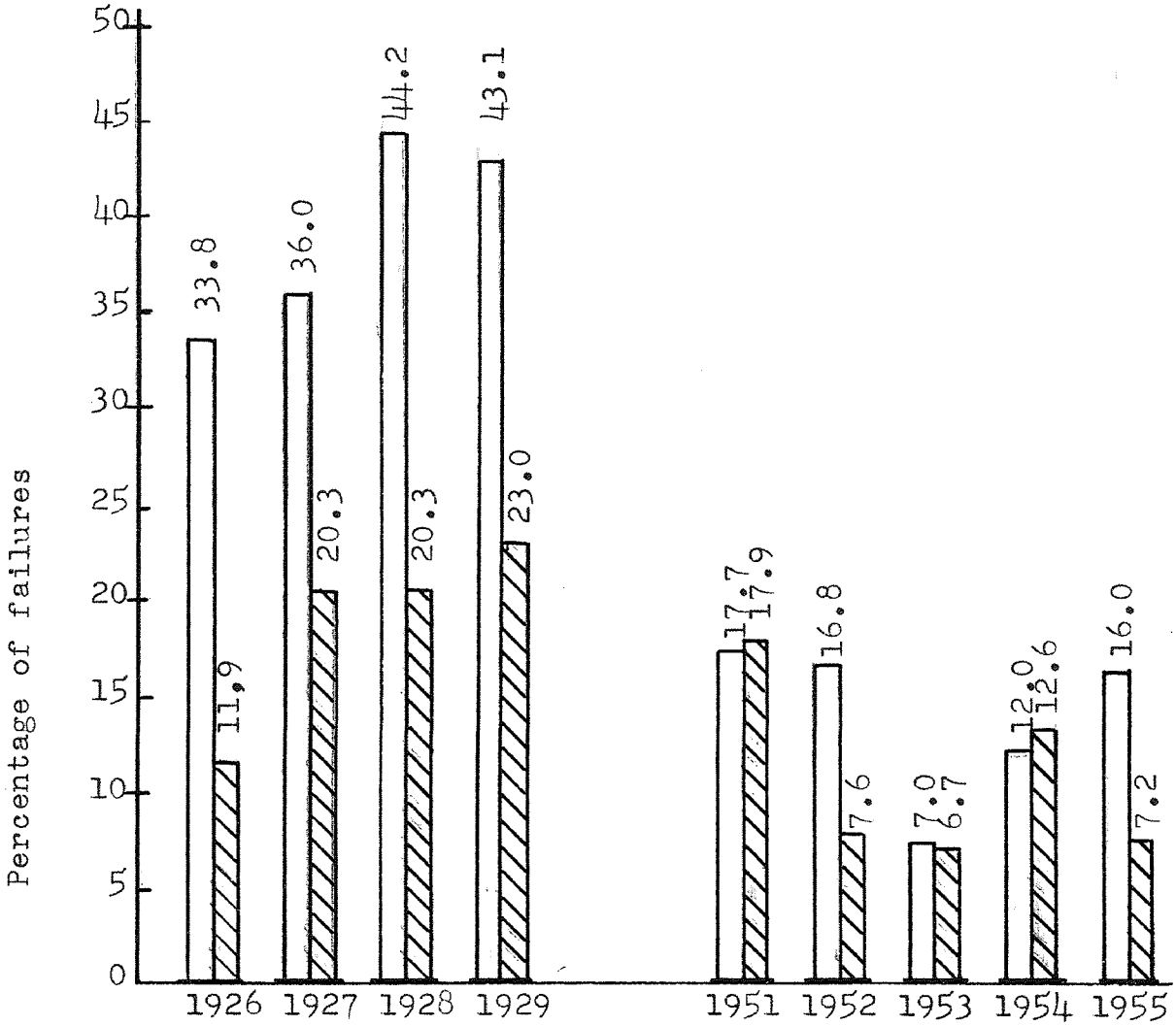

FIGURE 14

COMPARISON OF NINTH GRADE BOYS AND GIRLS RECEIVING A FAILING GRADE IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

BOYS GIRLS

drop-outs increased each year until the maximum of 17.3 per cent was reached in 1953-54. The percentage of failures then decreased during both the remaining years, reaching a minimum of 2.8 per cent in 1955-56.

A fluctuation in the percentage of boys' drop-outs was evident as shown in Figure 15. In 1951-52 and again in 1953-54 the percentage of drop-outs exceeded 22.0 per cent, but reached a minimum of 1.5 per cent in 1955-56.

Comparison of course failures and drop-outs. In Figure 16, a comparison of the average percentage of failures and drop-outs by students during the periods from 1926-30 and 1951-56 may be found.

The highest percentage of failures and drop-outs of boys occurred in 1929-30 with the next greatest percentages occurring in 1928-29. The smallest percentage of subject failures occurred in 1953-54, but the smallest percentage of drop-outs was reported in 1955-56. Approximately the same percentage of drop-outs was recorded for 1951-52, 19.5 per cent, and 1953-54 which was 19.6 per cent.

The average percentages of the drop-outs indicated that there was a decrease in the rate of drop-outs between the two periods studied. In the 1926-30 period the average was 25.1 per cent, while the average for the 1951-56 period was 14.2 which is a decrease of 10.8 per cent.

The average of the percentages of failures showed that

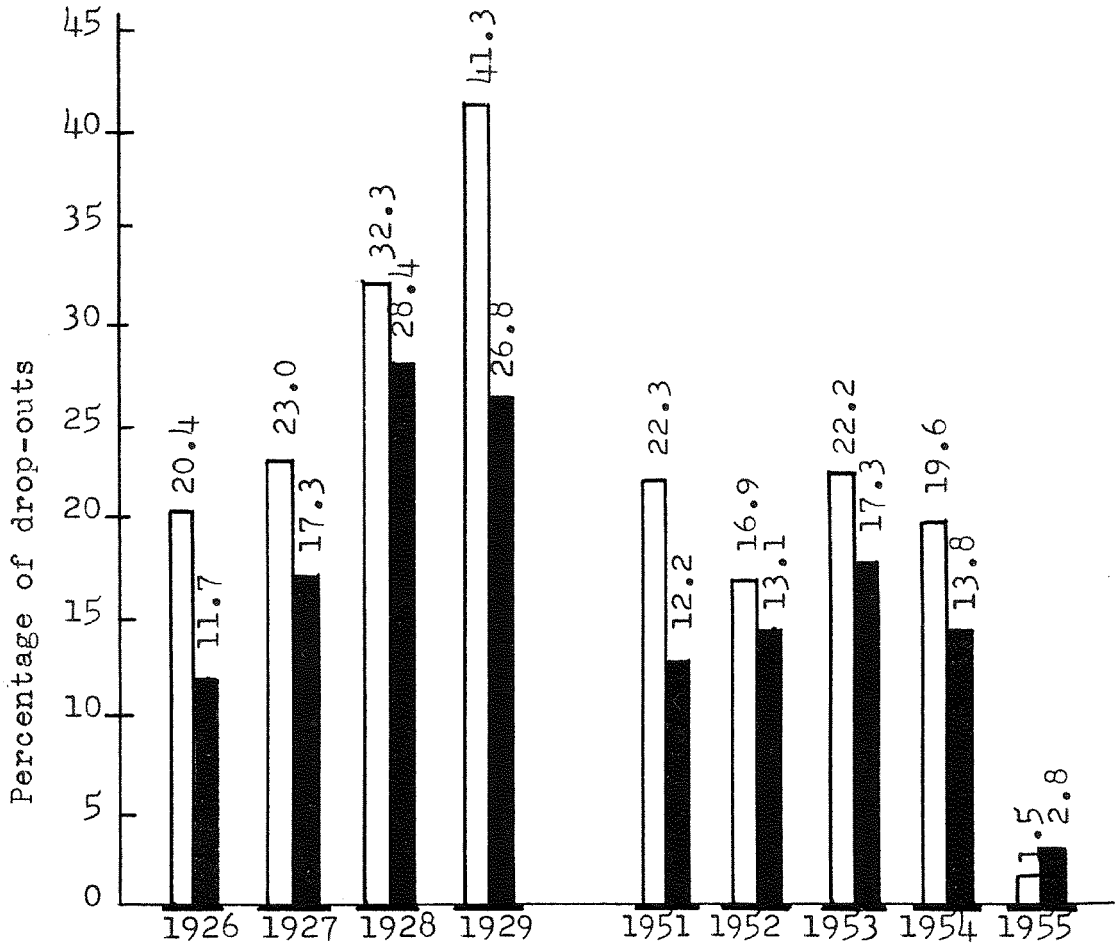

FIGURE 15

COMPARISON OF NINTH GRADE DROP-OUTS FROM THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

the same was true of the reduction of failures. In the period from 1926-30 it was 29.2 per cent, but in 1951-56 the average was 12.3 per cent. A decrease of 16.9 per cent in the average percentage of failures between the beginning and ending of the thirty year period was found.

Summary. The greatest percentage of failures occurring in the ninth grade of the Newton Public High School during the 1926-30 and 1951-56 periods was found in courses which involved mathematics. Of the students enrolled in General Mathematics, Elementary Accounting and Commercial Arithmetic, 11.4 per cent received failing grades during the periods studied. Algebra proved the next most difficult with an average of 7.9 per cent student failures during the nine years studied.

The average percentage of failures in Latin was 6.6 per cent for the 1926-30 and 1951-56 periods. Spanish and French had the highest percentage of failures, 13.1 per cent, of all subjects during the 1926-30 period, but was not offered during the 1951-56 period.

Homemaking had the smallest percentage of failures of any courses offered during the two periods with the exception of Speech and Debate which had no failures recorded.

The greatest average percentage of failures, 35.6 per cent, occurred in the 1929-30 period and the greatest average percentage of drop-outs, 34.2 per cent, was also recorded for

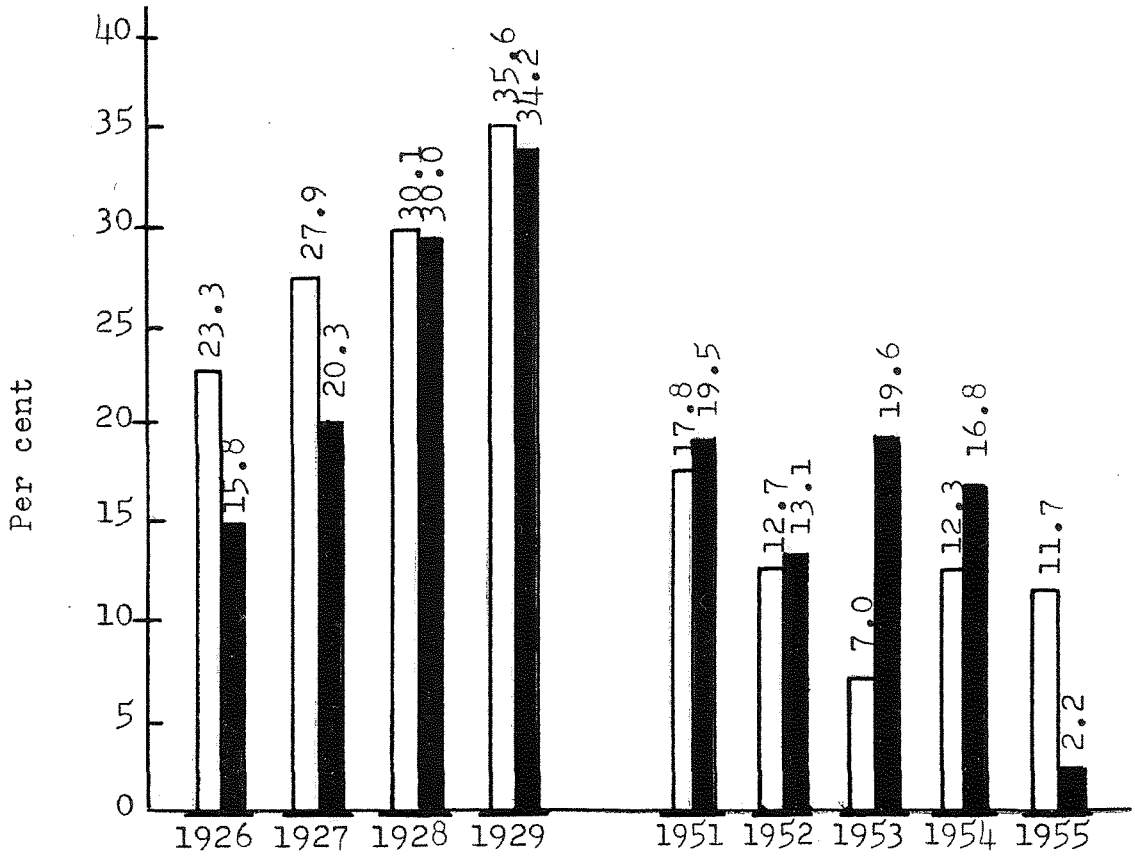

FIGURE 16

COMPARISON OF FAILURES AND DROP-OUTS OF NINTH GRADE STUDENTS IN NEWTON HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

FAILURES

DROP-OUTS

this same period. A reduction of 16.9 per cent in failures and 10.8 per cent in drop-outs took place during the thirty year period studied.

CHAPTER IV

SUMMARY, CONCLUSION, AND RECOMMENDATIONS FOR FURTHER RESEARCH

I. SUMMARY AND CONCLUSIONS

The purpose of this study was to ascertain whether the practice within the Newton Public High School accepted a premise of education of failure reduction in the ninth grade over a thirty year period. To accomplish this task, the four years of 1926-30 at the beginning of the period were compared with the five years of 1951-56 at the end of the period as to average percentage of failures and average percentage of drop-outs.

School failures are generally considered wasteful of human and financial resources. A double expenditure of funds is necessary to repeat courses due to failure. Detrimental losses to the student in the form of emotional disturbances and lowered economic capacities also result from student failures. To the degree that a society is influenced by human and natural resources, to such an extent will the individual losses caused by school failures affect the structure of that society also.

Lack of interest was found to be a main factor in students leaving school, while frustration, problems concerning adolescence, and financial reasons were also responsible

for students leaving school.

The ninth grade of the Newton Public High School has had a 16.9 per cent reduction in the percentage of failures over a thirty year period and a 10.8 per cent decrease in the percentage of drop-outs over the same time span from 1926 to 1956.

In general, in the ninth grade, a higher percentage of failures occurred among boys than was true for girls, with the exception of General Science.

Foreign languages, especially French, were the most difficult for the students enrolled in those courses, while courses involving mathematics was next in degree of difficulty. A greater percentage of students, however, failed General Mathematics than failed Junior Business or Algebra.

The lowest percentage of failures of both boys and girls was found to be in Speech and Debate where no failures were reported, but this may have been due to the selectivity of the courses since only the better students were permitted to enroll.

The highest average percentage of failures of both boys and girls was found to be in the 1929-30 period with the next highest period occurring during the 1928-29 school term.

II. RECOMMENDATIONS FOR FURTHER RESEARCH

Although progress has been made in reducing the percentage of failures and the percentage of subject drop-outs in

the ninth grade of the Newton Public High School, there is still a need for further research in this field.

Studies of the records of other schools and classes other than the ninth grade in the Newton Public High School are needed to determine whether the trend toward reduction of failures is growing in all grade groups in the public high schools.

Research into the methods of teaching those subjects which contain the smallest percentages of failures might also yield valuable principles which could be applied to subject areas where the greatest percentage of failures now occur.

Physiological factors may possibly accompany economic fluctuations and also affect the study habits of students. A comparative study of the percentages of student failures during years of prosperity and depression might yield information which could be of use to educators in improving methods of instruction commensurate with the prevailing economic standards.

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BIBLIOGRAPHY

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APPENDIX

TABLE III

PERCENTAGE OF FAILURES IN ALGEBRA OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage For Year	Percentage of Girls Failing	Average Percentage For Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
6.4		3.2		4.8		1st Sem.1955-56
6.6		3.2		4.9		2nd Sem.1955-56
	6.5		3.2		4.9	1955-56
4.2		4.1		4.1		1st Sem.1954-55
12.2		6.5		9.0		2nd Sem.1954-55
	8.2		5.3		6.6	1954-55
0.0		0.0		0.0		1st Sem.1953-54
0.0		2.0		1.1		2nd Sem.1953-54
	0.0		1.0		0.6	1953-54
1.1		6.3		3.5		1st Sem.1952-53
1.2		0.0		0.6		2nd Sem.1952-53
	1.2		3.2		2.1	1952-53
4.5		5.9		5.2		1st Sem.1951-52
6.0		9.9		8.0		2nd Sem.1951-52
	5.3		7.9		6.6	1951-52
20.6		13.9		17.7		1st Sem.1929-30
7.7		4.1		6.0		2nd Sem.1929-30
	14.2		9.0		11.8	1929-30
12.3		8.4		10.0		1st Sem.1928-29
16.7		9.9		13.3		2nd Sem.1928-29
	14.5		9.2		11.7	1928-29
13.9		12.8		13.3		1st Sem.1927-28
10.9		5.0		7.3		2nd Sem.1927-38
	12.4		8.9		10.3	1927-28
25.2		11.5		17.9		1st Sem.1926-27
8.3		6.3		7.3		2nd Sem.1926-27
	16.8		8.9		12.6	1926-27

TABLE IV

PERCENTAGE OF FAILURES IN LATIN OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage For Year	Percentage of Girls Failing	Average Percentage For Year	Percentage of Class Failing	Average Percentage For Year	Period Studied
0.0		0.0		0.0		1st Sem. 1955-56
0.0		3.1		2.6		2nd Sem. 1955-56
	0.0		1.6		1.3	1955-56
0.0		0.0		0.0		1st Sem. 1954-55
0.0		2.2		1.7		2nd Sem. 1954-55
	0.0		1.1		0.9	1954-55
0.0		5.6		4.7		1st Sem. 1953-54
0.0		0.0		0.0		2nd Sem. 1953-54
	0.0		2.8		2.4	1953-54
0.0		0.0		0.0		1st Sem. 1952-53
0.0		0.0		0.0		2nd Sem. 1952-53
	0.0		0.0		0.0	1952-53
0.0		4.0		2.6		1st Sem. 1951-52
0.0		0.0		0.0		2nd Sem. 1951-52
	0.0		2.0		1.3	1951-52
25.0		17.6		21.2		1st Sem. 1929-30
16.7		0.0		6.3		2nd Sem. 1929-30
	20.9		8.8		13.8	1929-30
9.1		17.4		13.3		1st Sem. 1928-29
9.1		0.0		5.9		2nd Sem. 1928-29
	9.1		8.7		9.6	1928-29
0.0		11.8		6.5		1st Sem. 1927-28
16.7		15.4		16.0		2nd Sem. 1927-28
	8.4		13.6		11.3	1927-28
31.6		12.1		19.2		1st Sem. 1926-27
9.1		6.9		7.5		2nd Sem. 1926-27
	20.4		9.5		13.4	1926-27

TABLE V

PERCENTAGE OF FAILURES IN ENGLISH OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
6.1		0.0		3.1		1st Sem. 1955-56
3.9		0.8		2.4		2nd Sem. 1955-56
	5.0		0.4		3.3	1955-56
3.2		0.9		2.0		1st Sem. 1954-55
1.7		2.6		2.1		2nd Sem. 1954-55
	2.5		1.8		2.1	1954-55
1.6		2.2		1.4		1st Sem. 1953-54
0.0		0.0		0.0		2nd Sem. 1953-54
	0.8		1.1		0.7	1953-54
8.8		0.8		5.1		1st Sem. 1952-53
9.8		1.8		6.1		2nd Sem. 1952-53
	9.3		1.3		5.6	1952-53
4.1		1.5		2.8		1st Sem. 1951-52
4.5		0.8		2.6		2nd Sem. 1951-52
	4.3		1.2		2.7	1951-52
12.6		2.0		7.2		1st Sem. 1929-30
7.9		0.7		4.5		2nd Sem. 1929-30
	10.3		1.4		5.9	1929-30
10.8		1.4		5.2		1st Sem. 1928-29
10.4		6.1		7.9		2nd Sem. 1928-29
	10.6		3.8		6.6	1928-29
17.2		8.0		12.6		1st Sem. 1927-28
6.2		3.8		4.8		2nd Sem. 1927-28
						1927-28
17.1		2.2		8.6		1st Sem. 1926-27
10.0		1.6		5.7		2nd Sem. 1926-27
	13.6		1.9		7.2	

TABLE VI

PERCENTAGE OF FAILURES IN HISTORY OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
0.8	0.4	*---	---	0.8	0.4	1st Sem. 1955-56
0.0		---		0.0		2nd Sem. 1955-56
0.0	0.0	---	---	0.0	0.0	1st Sem. 1954-55
0.0		---		0.0		2nd Sem. 1954-55
1.0	0.5	---	---	1.0	0.5	1st Sem. 1953-54
0.0		---		0.0		2nd Sem. 1953-54
5.2	2.6	---	---	5.2	2.6	1st Sem. 1952-53
0.0		---		0.0		2nd Sem. 1952-53
1.0	1.1	0.0	0.0	1.0	1.1	1st Sem. 1951-52
1.1		---		1.1		2nd Sem. 1951-52
4.5	4.2	2.6	2.5	3.5	3.3	1st Sem. 1929-30
3.9		2.4		3.1		2nd Sem. 1929-30
12.9	7.5	3.0	2.7	7.1	4.7	1st Sem. 1928-29
2.1		2.4		2.3		2nd Sem. 1928-29
1.4	0.7	1.1	0.6	1.2	0.6	1st Sem. 1927-28
0.0		0.0		0.0		2nd Sem. 1927-28
6.5	4.7	1.9	1.0	3.6	2.4	1st Sem. 1926-27
2.8		0.0		1.1		2nd Sem. 1926-27

*No girls enrolled in History during these semesters.

TABLE VII

PERCENTAGE OF FAILURES IN GENERAL MATHEMATICS OF NINTH GRADE IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
13.5	10.9	3.1	4.9	8.7	8.2	1st Sem. 1955-56
8.3		6.7		7.6		2nd Sem. 1955-56
9.4	10.4	13.6	16.8	11.1	12.8	1st Sem. 1954-55
11.4		20.0		14.5		2nd Sem. 1954-55
16.2	11.4	0.0	0.0	11.9	7.7	1st Sem. 1953-54
6.5		0.0		3.4		2nd Sem. 1953-54
14.0	10.8	2.7	2.6	9.6	7.5	1st Sem. 1952-53
7.5		2.5		5.4		2nd Sem. 1952-53
15.9	14.2	16.7	22.7	16.2	18.1	1st Sem. 1951-52
12.5		28.6		20.0		2nd Sem. 1951-52
*16.7	15.7	20.0	14.3	18.8	15.0	1st Sem. 1929-30
**14.6		8.5		11.2		2nd Sem. 1929-30
**15.4	7.7	8.3	20.8	12.0	13.2	1st Sem. 1928-29
** 0.0		33.3		14.3		2nd Sem. 1928-29
**12.5	12.5	0.0	0.0	7.7	7.7	1st Sem. 1927-28
+ ---		---		---		2nd Sem. 1927-28
+ ---	---	---	---	---	---	1st Sem. 1926-27
+ ---		---		---		2nd Sem. 1926-27

* Elementary Accounting was offered in place of General Mathematics.
** Commercial Arithmetic was offered in place of General Mathematics.
\+ No courses comparable to General Mathematics were offered during these semesters.

TABLE VIII

PERCENTAGE OF FAILURES IN GENERAL SCIENCE OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
0.0 9.3	4.7	0.0 6.5	3.3	0.0 7.4	3.7	1st Sem. 1955-56 2nd Sem. 1955-56
0.0 0.0	0.0	1.3 7.8	4.6	1.0 6.3	3.7	1st Sem. 1954-55 2nd Sem. 1954-55
0.0 5.3	2.7	10.0 4.1	7.1	4.5 4.3	4.4	1st Sem. 1953-54 2nd Sem. 1953-54
0.0 0.0	0.0	2.0 0.0	1.0	1.5 0.0	0.8	1st Sem. 1952-53 2nd Sem. 1952-53
9.1 0.0	4.6	6.7 0.0	3.4	8.1 0.0	4.1	1st Sem. 1951-52 2nd Sem. 1951-52
0.0 0.0	0.0	0.0 ---	0.0	0.0 0.0	0.0	1st Sem. 1929-30 2nd Sem. 1929-30
0.0 ---	0.0	5.4 ---	5.4	3.5 ---	3.5	1st Sem. 1928-29 2nd Sem. 1928-29
0.0 ---	0.0	0.0 ---	0.0	0.0 ---	0.0	1st Sem. 1927-28 2nd Sem. 1927-28
0.0 ---	0.0	4.3 ---	4.3	2.2 ---	2.2	1st Sem. 1926-27 2nd Sem. 1926-27

---General Science was offered only to rural students during these semesters; students attending Newton Elementary schools received training in science prior to entering high school.

TABLE IX

PERCENTAGE OF FAILURES IN ART OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
12.5	8.5	0.0	1.0	4.2	3.5	1st Sem. 1955-56
4.5		2.0		2.8		2nd Sem. 1955-56
2.3	1.2	0.0	0.0	0.8	0.4	1st Sem. 1954-55
0.0		0.0		0.0		2nd Sem. 1954-55
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1953-54
0.0		0.0		0.0		2nd Sem. 1953-54
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1952-53
0.0		0.0		0.0		2nd Sem. 1952-53
7.1	6.4	2.2	3.25	3.4	4.1	1st Sem. 1951-52
5.6		4.3		4.7		2nd Sem. 1951-52
*		*		*		1929-30
*		*		*		1928-29
*		*		*		1927-28
*		*		*		1926-27

*Art not offered during these years.

TABLE X

PERCENTAGE OF FAILURES IN GENERAL SHOP & RELATED SUBJECTS OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Subject Offered	Percentage of Boys Failing	Average Per Cent for Year	Period Studied
General Shop	0.0	0.0	1st Sem. 1955-56
General Shop	0.0		2nd Sem. 1955-56
General Shop	0.0	0.0	1st Sem. 1954-55
General Shop	0.0		2nd Sem. 1954-55
General Shop	0.0	0.0	1st Sem. 1953-54
General Shop	0.0		2nd Sem. 1953-54
General Shop	0.0	0.0	1st Sem. 1952-53
General Shop	0.0		2nd Sem. 1952-53
Mechanical Drawing	0.0	0.0	1st Sem. 1951-52
Mechanical Drawing	0.0		2nd Sem. 1951-52
Carpentry & Mech. Drawing	1.8	5.7	1st Sem. 1929-30
Carpentry & Mech. Drawing	9.6		2nd Sem. 1929-30
Trades & Industry, Mech. Dr.	1.6	5.3	1st Sem. 1928-29
Trades & Industry, Mech. Dr.	9.0		2nd Sem. 1928-29
Trades & Industry	0.0	5.5	1st Sem. 1927-28
Trades & Industry	11.1		2nd Sem. 1927-28
Trades & Industry	10.0	5.0	1st Sem. 1926-27
Trades & Industry	0.0		2nd Sem. 1926-27

TABLE XI

PERCENTAGE OF FAILURES IN SPEECH AND DEBATE OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1955-56
0.0		0.0		0.0		2nd Sem. 1955-56
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1954-55
0.0		0.0		0.0		2nd Sem. 1954-55
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1953-54
0.0		0.0		0.0		2nd Sem. 1953-54
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1952-53
0.0		0.0		0.0		2nd Sem. 1952-53
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1951-52
0.0		0.0		0.0		2nd Sem. 1951-52
*		*		*		1st Sem. 1929-30
*		*		*		2nd Sem. 1929-30
*		*		*		1st Sem. 1928-29
*		*		*		2nd Sem. 1928-29
0.0	0.0	0.0	0.0	0.0	0.0	1st Sem. 1927-28
*		*		*		2nd Sem. 1927-28
*		*		*		1st Sem. 1926-27
*		*		*		2nd Sem. 1926-27

*Speech and Debate not offered these semesters.

TABLE XII

PERCENTAGE OF FAILURES IN SPANISH AND FRENCH OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
*		*		*		1st Sem. 1955-56
*		*		*		2nd Sem. 1955-56
*		*		*		1st Sem. 1954-55
*		*		*		2nd Sem. 1954-55
*		*		*		1st Sem. 1953-54
*		*		*		2nd Sem. 1953-54
*		*		*		1st Sem. 1952-53
*		*		*		2nd Sem. 1952-53
*		*		*		1st Sem. 1951-52
*		*		*		2nd Sem. 1951-52
50.0	50.0	0.0	12.5	25.0	29.0	1st Sem. 1929-30
50.0		25.0		33.0		2nd Sem. 1929-30
14.3	7.2	8.3	4.2	10.5	5.3	1st Sem. 1928-29
0.0		0.0		0.0		2nd Sem. 1928-29
28.6	31.0	0.0	0.0	10.5	12.4	1st Sem. 1927-28
33.3		0.0		14.3		2nd Sem. 1927-28
25.0	12.5	0.0	0.0	11.1	5.5	1st Sem. 1926-27
0.0		0.0		0.0		2nd Sem. 1926-27

*No French or Spanish offered during these semesters; French was offered during the 1st and 2nd semester of 1929-30, all others are Spanish failures.

TABLE XIII

PERCENTAGE OF FAILURES IN JUNIOR BUSINESS OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-29

Percentage of Boys Failing	Average Percentage for Year	Percentage of Girls Failing	Average Percentage for Year	Percentage of Class Failing	Average Percentage for Year	Period Studied
17.3	17.3	9.0	9.0	12.6	12.6	1st Sem. 1929-30
*		*		*		2nd Sem. 1929-30
5.0	4.4	4.0	2.0	4.3	2.8	1st Sem. 1928-29
3.7		0.0		1.3		2nd Sem. 1928-29
6.9	7.4	0.0	1.9	3.1	4.3	1st Sem. 1927-28
7.9		3.7		5.4		2nd Sem. 1927-28
20.0	20.0	-	-	20.0	20.0	1st Sem. 1926-27
*		*		*		2nd Sem. 1926-27

*Junior Business not offered during these semesters.
-No girls enrolled during this semester.

TABLE XIV

PERCENTAGE OF NINTH GRADE STUDENTS RECEIVING FAILING GRADES IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Failing	Average Per Cent For Year	Percentage of Girls Failing	Average Per Cent for Year	Period Studied
17.4		3.1		1st Sem. 1955-56
14.5		11.3		2nd Sem. 1955-56
	16.0		7.2	1955-56
9.7		7.8		1st Sem. 1954-55
14.2		17.4		2nd Sem. 1954-55
	12.0		12.6	1954-55
10.5		8.9		1st Sem. 1953-54
3.4		4.5		2nd Sem. 1953-54
	7.0		6.7	1953-54
20.1		9.6		1st Sem. 1952-53
13.5		5.5		2nd Sem. 1952-53
	16.8		7.6	1952-53
20.5		16.4		1st Sem. 1951-52
14.9		19.3		2nd Sem. 1951-52
	17.7		17.9	1951-52
50.0		25.2		1st Sem. 1929-30
46.1		20.8		2nd Sem. 1929-30
	43.1		23.0	1929-30
43.0		19.9		1st Sem. 1928-29
45.3		20.6		2nd Sem. 1928-29
	44.2		20.3	1928-29
46.4		28.6		1st Sem. 1927-28
25.6		12.0		2nd Sem. 1927-28
	36.0		20.3	1927-28
46.1		13.5		1st Sem. 1926-27
21.6		10.4		2nd Sem. 1926-27
	33.8		11.9	1926-27

TABLE XV

PERCENTAGE OF NINTH GRADE SUBJECTS NOT COMPLETED BY STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage of Boys Dropping	Average Per Cent for Year	Percentage of Girls Dropping	Average Per Cent for Year	Period Studied
0.0		0.0		1st Sem. 1955-56
3.1		5.6		2nd Sem. 1955-56
	1.5		2.8	1955-56
23.4		25.0		1st Sem. 1954-55
15.8		2.6		2nd Sem. 1954-55
	19.6		13.8	1954-55
23.7		8.9		1st Sem. 1953-54
20.7		25.6		2nd Sem. 1953-54
	22.2		17.3	1953-54
19.4		8.8		1st Sem. 1952-53
14.3		17.3		2nd Sem. 1952-53
	16.9		13.1	1952-53
34.1		12.9		1st Sem. 1951-52
10.5		11.4		2nd Sem. 1951-52
	22.3		12.2	1951-52
27.9		24.4		1st Sem. 1929-30
53.7		29.2		2nd Sem. 1929-30
	41.3		26.8	1929-30
33.0		33.3		1st Sem. 1928-29
31.6		23.5		2nd Sem. 1928-29
	32.3		28.4	1928-29
24.2		17.1		1st Sem. 1927-28
21.8		17.5		2nd Sem. 1927-28
	23.0		17.3	1927-28
16.6		8.2		1st Sem. 1926-27
24.2		15.2		2nd Sem. 1926-27
	20.4		11.7	1926-27

TABLE XVI

COMPARISON OF PERCENTAGE OF FAILURES AND DROP-OUTS OF NINTH GRADE STUDENTS IN THE NEWTON PUBLIC HIGH SCHOOL FROM 1926-30 AND FROM 1951-56

Percentage* of Failures	Average Per Cent for Year	Percentage* of Drop-Outs	Average Per Cent for Year	Period Studied
10.4		0.0		1st Sem. 1955-56
12.9		4.3		2nd Sem. 1955-56
	11.7		2.2	1955-56
8.8		24.2		1st Sem. 1954-55
15.7		9.4		2nd Sem. 1954-55
	12.3		16.8	1954-55
10.0		16.0		1st Sem. 1053-54
4.0		23.2		2nd Sem. 1953-54
	7.0		19.6	1953-54
15.4		14.6		1st Sem. 1952-53
9.9		11.5		2nd Sem. 1952-53
	12.7		13.1	1952-53
18.5		27.9		1st Sem. 1951-52
17.1		11.0		2nd Sem. 1951-52
	17.8		19.5	1951-52
37.2		26.1		1st Sem. 1929-30
33.9		42.3		2nd Sem. 1929-30
	35.6		34.2	1929-30
29.5		33.2		1st Sem. 1928-29
30.7		26.8		2nd Sem. 1928-29
	30.1		30.0	1928-29
37.3		20.6		1st Sem. 1927-28
18.5		19.9		2nd Sem. 1927-28
	27.9		20.3	1927-28
30.2		11.9		1st Sem. 1926-27
16.3		19.6		2nd Sem. 1926-27
	23.3		15.8	1926-27

*These percentages are based upon the total number of students receiving a failing grade in a subject and the total number of students not completing a subject in comparison to the ninth grade enrollment for the period indicated.

TABLE XVII

COMPARISON OF NINTH GRADE STUDENT FAILURES IN VARIOUS SUBJECTS FROM 1926-30 AND FROM 1951-56 IN THE NEWTON PUBLIC HIGH SCHOOL

Average Percentage of failures per Subject From 1926-30	Average Percentage of failures per Subject from 1951-56	Average Percentage of Failures per Subject Over Both Periods	Ninth Grade Subjects Studied
13.1	---	13.1	Spanish and French
12.0	1.2	6.6	Latin
12.0	10.9	11.4	Gen. Math., Comm. Arith., and Elementary Accounting
11.6	4.2	7.9	Algebra
10.0	0.0	5.0	Vocational Agri. & Related Subj.
9.9	---	9.9	Junior Business
7.1	2.9	5.0	English
5.4	0.0	2.7	Gen. Shop & Related Subjects
2.8	0.9	1.8	History
1.9	0.9	1.4	Homemaking
1.4	3.3	2.4	General Science
---	1.6	1.6	Art

---Not offered during this period.